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CATALOGUE

—OF—

Fruit and Ornamental Trees

GRAPE VINES,

Small Fruits, Shrubs, Plants, Roses, Etc.

CULTIVATED AND FOR SALE BY

1893

W. C. REED, PROP'R.

VINCENNES NURSERIES, VINCENNES, IND.

Four Miles East of City.




THE IDAHO PEAR

PREFACE.

IN PRESENTING this Catalogue it is safe to assert that the Nursery business has kept abreast with all the other great enterprises of the country. A host of new varieties of the various kinds of fruits have been brought to the front, some of which have been classed with those very worthy of cultivation, while many of the others have fallen back into the grave of despair, being classed as worthless and never again to be resurrected. The past few years have developed the fact that the fruit business and the growing of fruits for the market will be in the front rank of the great business enterprises of the West. This is evidenced by the large amount of fruit trees that are being planted and the interest being manifested in the selection of varieties; the care taken in the growing of trees and in the destroying of the destructive insects that are so fatal to the growing and developing of sound, healthy, well developed fruits.

The rapid increase in the manufacture and in the demand for spraying machines is another strong evidence of the interest being taken in the growing and maturing of good sound fruit for the market. But the nurserymen have not only to consult the wants of those who are plating large commercial orchards for the money to be derived therefrom, but his desire is also to reach the amateur and moderate planter, whose object is to grow a family orchard of the varieties best suited for dessert and home consumption, so that a succession of the best fruits from the earliest to the latest ripening may be obtained, and thus, in the preparing of this catalogue the greatest pains have been taken to make the descriptions and the season of ripening as acurate and intelligible as possible.

ADVICE TO CORRESPONDENTS.

Please read before making out your order.

Persons sending in orders should observe as far as possible the following regulations:

First. Send in your order as early as possible so that there may be no delay when the proper time for shipment arrives. All orders will receive prompt attention.

Second. All orders should be written out on an order sheet and not mixed up in the body of the letter; this will save much trouble and at the same time prevent mistakes.

Third. In ordering fruit trees state whether Standard or Dwarf trees are wanted, also the age, size and number wanted.

Fourth. When particular varieties are ordered, state whether and to what extent other varieties may be substituted, in case the order cannot be filled to the letter as happens occasionally in all nurseries, when no instructions of this kind accompanies the order, the best judgment will be exercised in filling the order so as to render satisfaction to the purchaser.

Fifth. It is requested that explicit directions for marking and shipping stock accompany the order, when such directions are not given, it will be shipped the cheapest and most direct route by freight unless it is deemed safest and best to ship by express, and in all cases the shipment will be at the risk of the purchaser, and if delay or loss occurs in transit the forwarders alone must be held responsible.

Sixth. All orders from unknown correspondents must be accompanied with a draft, or post-office or express money order for the amount, if neither can be obtained enclose currency in registered letter.

Seventh. Customers are requested to send notice at once of any error that may be committed in filling their order, so that it may be rectified and explained.

ARTICLES BY MAIL.

Packages of small articles will be sent by mail, prepaid, for the convenience of those who can not be reached by railroad or express.

THE SHIPPING SEASON.

There can be no definite time specified for beginning to ship stock either in the spring or in the autumn, that is regulated by the opening of the spring early or late and by the ripening up of

the stock in the fall, as the season for planting is not regulated so much by any particular month or day, nor by the state of vegetation where the planting is to be done, but more particularly *by the condition of the trees to be planted.* It is therefore the more earnestly requested that orders be sent in early and the stock will be shipped or delivered at the proper season in good condition.

GUARANTEE OF GENUINENESS.

While the greatest diligence and care to have all trees, etc., true to label will be exercised, mistakes may occur and in such cases upon proper proof the trees, etc., will be replaced free of charge or the amount of money paid for them will be refunded, and it is mutually understood and agreed to between the purchaser and the seller that the guarantee of genuineness shall in no case make the nurserymen who sold the trees, etc., liable for any sum greater than that originally paid for the trees, etc., that proved untrue, nor for damage.

REMARKS.

In looking over the index of an old edition of Downing's Fruits and Fruit Trees of America, there appears the names of about 3,450 Apples, 2,770 Pears, 880 Plums, 500 Peaches, 550 Cherries, 600 Grapes, 450 Strawberries, etc. This includes the synonyms which would doubtless reduce the real number of the different kinds to one-half the above amount, but when we consider the many new varieties that have been added to the list in the past forty years, and compare the number of varieties now in cultivation, we will readily see how few of all this number have proved beneficial or profitable to the commercial and also the small orchardist. Thirty to forty varieties of Apples would probably cover the amount regarded as profitable for commercial purposes, and eighty to one hundred varieties for the ordinary planter, and only a few of these are generally selected for a well arranged orchard for either commercial or family purposes, and it would be in about the same or a less proportion with the other kinds of fruits. Therefore, in arranging this catalogue only such varieties are given a place as are now in general cultivation (some of which will succeed well only in certain localities), and also such new varieties as are generally approved, so that by a judicious selection from this list a model orchard may be obtained.

HINTS ON TRANSPLANTING, ETC.

The failure in having trees, etc., to grow or even to grow off vigorously after being translanted is too often caused by too much exposure of the roots to the atmosphere, or a lack of sufficient moisture about the roots while out of the ground, yet a healthy tree may be taken fresh from the ground where it grew and kept in the very best condition, and when properly transplated will die from some unknown cause. A feeble or poor growth is usually caused by not having the ground in proper condition at the time of transplanting and a lack of proper after-cultivation.

The natural place for a fish is in the water, so the natural place for the roots of trees and plants is in the ground. The moment a fish is taken from the water it begins to sicken and die, so the moment the roots of trees, etc., are exposed to the atmosphere they begin to loose their vitality, therefore let it be remembered that too much care cannot be taken to protect the life and vitality of trees and plants while out of the ground.

SOIL, ITS PREPARATION, EXPOSURE, ETC.

Any soil that will grow good crops of corn and small grain will answer for fruit trees, etc. Eastern and northern exposures are usually considered the best, but perhaps more depends on the quality of the soil and its preparation and after-cultivation than in the exposure. If the ground is naturally wet, spouty and cold, artificial draining is necessary before planting. Any ground should be well prepared by twice plowing, using the subsoil plow after the common one at the second plowing, and stiring the ground twenty inches or more deep, the deeper the better; this is not only for trees but small fruits as well. On good rich soil manuring will be unnecessary, but on thin or poor soil, fertilizers, such as well decomposed manure or compost, should be applied freely. Never grow small grain in the orchard, but always some crop that will require thorough cultivation, and the rows of trees should be kept cultivated at least until the month of August.

Transplanting. When the trees are received, open the bundles and heel in so that mellow earth will come in contact with all the roots. It may be necessary to apply water to moisten the soil; before planting, the ends of all bruised and broken roots must be cut sloping from the under side. If the soil is properly prepared the holes need not be dug much larger than to receive the roots in their original position. In planting in sod in yard or lawn the hole should be dug four to six feet

in diameter and a little deeper than is necessary to set the tree, always using good mellow soil in filling in, pressing the ground well about the roots, and in such a manner as to leave them in their natural position as much as possible. Water freely used in planting helps to settle the earth about the roots and a mulching as soon as the tree is planted three or four inches thick and four to six feet in diameter should be applied, but the earth should be well pressed about the tree before applying the mulching.

DEPTH TO PLANT.

About the only correct guide that can be given in regard to the depth to be planted is that when the ground is well pressed about the tree or plant it will be as deep or a little deeper than it stood in the nursery; and in this it is well to bear in mind that the roots of some trees such as the Standard Pear, strike their roots deep, and require a deep hole even to plant them as deep as they were in the nursery. Dwarf trees should be planted so that all the stock on which they are worked will be under the ground.

PRUNING.

Cut back one-third to one-half of the last season's growth, and one year old Peach to almost a bare stock and headed back to the desired height, for forming the top; the buds on the body of the tree will make a better growth and form a better top than if the side branches are left on. It is not advisable to do any of this pruning until just before the buds start in the spring. Remove the labels before the trees begin to grow.

WINTERING TREES WHEN PROCURED IN THE FALL.

Procuring trees in the Autumn for early spring planting, is recommended when the purchaser is not prepared to plant in the fall or prefers spring setting, or where the winters are too severe to set out young trees and plants in the fall; the greatest advantages derived in doing so are that when the roots have been cut or pruned, it will be found upon taking them up in the spring that a callus has been formed ready for the producing of new rootlets, and the trees being planted without much exposure as soon as the frost is out of the ground; will become thoroughly established the first season, and should make twice the growth of late planted trees; and the labor of planting is then done before the rush of the spring work sets in. To insure success select a dry spot of ground where water will not stand during winter, and no grass or litter that will invite mice. Dig a trench from three to four feet wide according to the amount of trees to be healed in, and deep enough to admit one layer of roots and sloping enough to let the trees lay at an angle of about thirty degrees, throwing the earth on the back part of the trenches so as to make a more perfect slope on which to lay down the trees. Put in one layer of trees, placing the roots as close together as can conveniently be done, cover with well pulverized soil well up on the bodies and as carefully worked in about the roots as if they were being planted; then add another layer of trees overlaping the first and continue as at first until all are healed in, throwing the ground well up around the trench, and where the winters are very severe it is advisable to cover the tree entirely up with earth. Evergreen boughs or coarse straw or corn fodder can be placed over the tops, but not thick enough to admit of a harbor for mice. The roots should be pruned before laying them down in the fall.

TREATMENT OF TREES, ETC., THAT HAVE BEEN FROZEN IN THE PACKAGES OR RECEIVED DURING FROSTY WEATHER.

Put them unopened in a cellar or some other cool protected place free from frost, or cover them up heavily and entirely with earth until they are fully thawed out, when they can be unpacked and planted or placed in trenches until convenient to plant; treated in this way they will not be injured by the freezing.

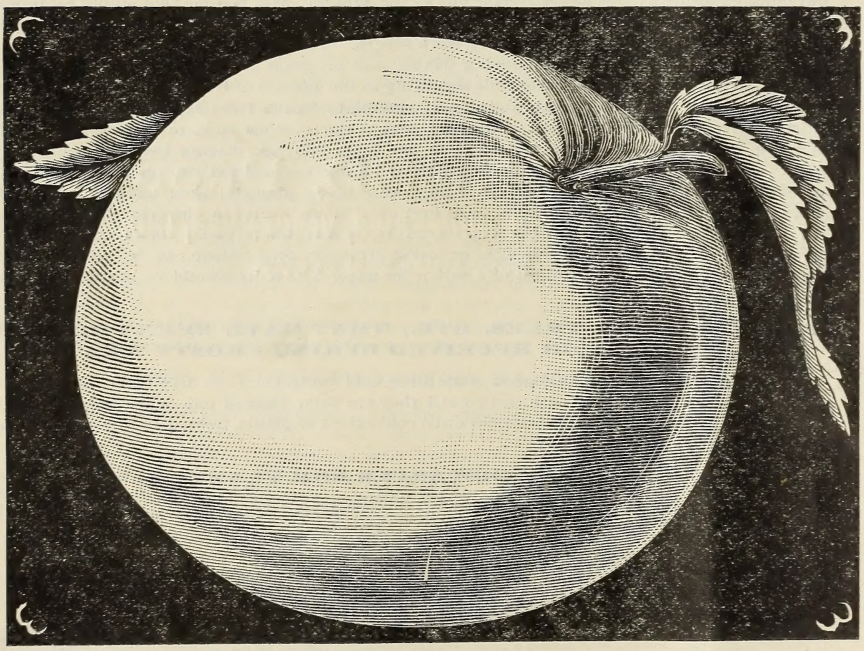
SUITABLE DISTANCES FOR PLANTING.

Apples, Standard	25 to 40 feet	Grapes	8 to 10 feet
Apples, Dwarf	6 to 8 "	Currants	3 to 4 "
Pears, Standard	16 to 18 "	Gooseberries	3 to 4 "
Pears, Dwarf	10 "	Raspberries, Red	4 to 5 "
Peaches	16 to 18 "	Raspberries, Black	5 to 6 "
Nectarines and Apricots	16 to 18 "	Blackberries	5 to 7 "
Cherries, Sweet	16 to 20 "	Strawberries, Rows	1 by 3½ "
Cherries, Sour	12 to 15 "	Strawberries in Beds	1½ by 1½ "
Plums	16 to 20 "	Asparagus in Beds	1 by 1½ "
Quinces	10 to 12 "		

NUMBER OF TREES AND PLANTS ON AN ACRE AT VARIOUS DISTANCES.

1 foot x 1 foot	43,560	5 feet x 5 feet	1,742
2 feet x 1 feet	21,780	6 feet x 6 feet	1,210
2 feet x 2 feet	10,890	8 feet x 8 feet	680
3 feet x 1 foot	14,520	10 feet x 10 feet	435
3 feet x 2 feet	7,260	12 feet x 12 feet	302
3 feet x 3 feet	4,840	15 feet x 15 feet	193
4 feet x 1 foot	10,890	16 feet x 16 feet	170
4 feet x 2 feet	5,445	18 feet x 18 feet	134
4 feet x 3 feet	3,630	20 feet x 20 feet	108
4 feet x 4 feet	2,722	25 feet x 25 feet	69
5 feet x 2 feet	4,356	30 feet x 30 feet	48
5 feet x 3 feet	2,904	33 feet x 20 feet	66
5 feet x 4 feet	2,178		

The number of plants required for an acre, at any given distance apart, may be ascertained by dividing the number of square feet in an acre (43,560) by the number of square feet given to each plant, which is obtained by multiplying the distance between *rows* by the distance between the *plants*. Thus, Strawberries planted three feet by one foot, gives each plant three square feet, or 14,520 plants to the acre.



FRUIT DEPARTMENT.

NOTE 1. Those sorts with a star prefixed are of recent origin or introduction and usually classed as New, Ironclad, and Russian varieties.

NOTE 2. Habit of growth is indicated by *Mod.*, *Free*, *Vig.*, *Slow*, at end of description, meaning Moderate, Free, Vigorous, or Slow growers.

NOTE 3. The season of ripening given after habit of growth embraces that portion of the country between parallels thirty-nine and forty. This takes in Dayton, Ohio; Indianapolis, Indiana; Springfield, Illinois; Kansas City, Missouri, and Topeka, Kansas. The season of ripening will be earlier or later in proceeding South or North.

NOTE 4. Directions for spraying will be found in the last pages of this catalogue.

APPLES.

The Apple stands at the head of the list in importance both for general culture and for commercial purposes. Its season unlike that of other fruits extend nearly or quite through the year. By planting judicious selections of Summer, Autumn, and Winter sorts, a constant succession can be obtained of this indispensable fruit for family use. Past experience has proven that no other farm crop will produce as much income per acre as an Apple orchard. As it takes from five to seven years for an Apple orchard to come into bearing some persons hesitate to plant, regarding the time too long to wait, but when we look back a period of a few years we observe how quickly time has passed, and so it will be in the future as in the past, and one thing is certain if we do not plant we will never obtain. To encourage those who are hesitating as regards the profits obtained from the growing of Apples for the market, a statement from Messrs. Wellhouse & Son, of Fairmont, Leavenworth County, Kansas, dated July 13, 1892, is here given as follows:

"GENTLEMEN:—Yours of July 9th, is at hand and in reply have to say that our bearing orchards were planted in 1876, 1878 and 1879 and covers 437 acres and commenced bearing in 1880, and up to this time from twelve crops we have gathered and sold 300,565 bushels, and after paying for gathering, packing and marketing, these crops have netted us a little over $82,000.00." Now this indicates what perseverance and determination will do, and to show the confidence that these mammoth fruit growers have in this lucrative business they further add: "We have planted eight hundred acres in the last three years and will plant three hundred acres a year from next spring." Observe *that the net profits* in twelve years was a little over eighty-two thousand dollars and this begins only four years after the first planting.

Some persons may say that there are so many orchards being planted that the demand will not equal the supply and thus hesitate to plant. This has been the cry for the past thirty or forty years, and it is the commercial fruit grower to-day that is taking in the money far exceeding that obtained by the ordinary farmer. This is a large country and it is seldom that there is a full crop of fruit in all the states and territories the same year, and the evaporating of fruits has become such an immense business that it may be doubted if orcharding will ever in any season be less than highly remunerative.

If Apples are planted at the rate of fifty trees per acre, rows of Peach trees can be planted between the Apples, which, growing more quickly than the Apple trees, soon protect them from the wind, and thus are a great benefit to them. After eight or ten years of productiveness, as the space is needed for Apples, the Peach trees may be removed, leaving the orchard better for the protection, and at the same time having yielded the planter a large return for his trouble.

SUMMER APPLES.

NOTICE.—Those with * are of recent origin or introduction.

American Summer Pearmain. Medium, oblong; striped and dotted with red; tender, juicy and rich; good bearer; mod. August.

Astrachan Red. Large, roundish, nearly covered with deep crimson, overspread with thick bloom; juicy, rich and beautiful; a good bearer; free. July.

Benoni. Medium, roundish; pale yellow shaded with crimson; juicy, tender, sub-acid. August.

Carolina Red June. (Red June). Medium size, red, flesh white, tender, juicy, sub-acid; an abundant bearer. Last of June.

Chenango Strawberry. (Sherwood's Favorite). Fruit medium size, oblong, indistinctly ribbed; skin whitish, splashed and mottled with light and dark crimson; flesh white, tender, juicy, with a mild sub-acid flavor. A pleasant fruit, esteemed for the table, and so handsome as to make it a quick selling market variety. Tree vigorous and a good bearer. Aug. and Sept.

Cooper's Early White. Very large, roundish, pale yellow with faint blush; flesh white, crisp, sprightly; a Western apple; vig. First of August.

Duchess of Oldenburg. Russian, medium to large size; skin yellow, streaked with red and somewhat blushed sometimes with a faint blue bloom; flesh juicy and good, with a rich sub-acid flavor; productive; slow. August.

Early Harvest. Medium to large, roundish, bright straw color; flesh white, tender, juicy, crisp, with rich sub-acid flavor; tree moderately vigorous and productive; one of the best. First of July.

Early Strawberry. Medium, roundish, handsomely striped with red; excellent, productive; mod. First of July.

Early Ripe. A large yellow apple, ripening with or immediately after the Early Harvest; a popular market fruit; free. First of July.

Golden Sweet. Large, pale yellow, very sweet and good; good bearer; free. August.

Jefferis. Rather large, roundish, yellow skin striped with red; very rich, tender and juicy. This very beautiful variety is unsurpassed for dessert. Free. July to September.

Keswick Codlin. Large, tender, juicy; excellent for cooking; productive and early in bearing; free. July and August.

***Plumb's Cider.** An early bearer and productive; fruit medium, roundish, slightly conical; skin greenish yellow, shaded and rather obscurely striped and splashed with dull red; flesh whitish, tender, juicy and mild, sub-acid; vig. August and September.

***Red Bietigheimer.** A rare and valuable German variety; fruit large to very large; roundish, inclining to conical; skin pale cream colored ground, mostly covered with a purplish crimson; flesh white, firm, sub-acid, with a brisk pleasant flavor; tree a free grower and abundant bearer. This is one of the handsomest apples, and worthy of extensive cultivation; vig. August and September.

Sweet June, or High Top Sweet. An excellent early sweet apple; pale greenish yellow, medium size, round; fine for table and cooking, perfectly tender; mod. 25th of June to middle of July.

Sweet Bough. Large, pale greenish yellow, tender and sweet; good bearer; mod. July.

Summer Queen. Medium to large, yellow streaked with red; flesh tender with an acid aromatic flavor; mod. August.

Sops of Wine. Medium size, red; flesh white, often stained; mild and pleasant; productive; free. July and August.

Tetofsky. (Russian). The tree is an upright spreading grower, forming an open head, comes into bearing extremely early and bears every year; hardy as a crab, fruit good size, nearly round; yellow, beautifully striped with red; flesh white, juicy, pleasant, acid, aromatic; very slow in nursery. July.

***Yellow Transparent.** (Russisn Transparent, Grand Sultan). Of Russian origin; imported by the Department of Agriculture in 1870; ripening with Early Harvest, while the fruit will keep fully ten days after ripening, making it peculiarly adapted for early shipping. Fruit pale yellow, roundish, oblate; medium size and good quality; skin clear white at first, becoming a beautiful yellow when fully ripe; slow.

AUTUMN APPLES.

***Alexander.** (Emperor Russia). Large, deep red or crimson; flesh yellowish white, crisp, tender, with pleasant flavor; very hardy; mod. October.

Autumn Strawberry. Medium, streaked; tender, juicy, fine; productive; desirable; free. August and September.

Bailey's Sweet. Fruit large, round, mottled and striped deep red; flesh yellow and tender, with a mild, rich sweet flavor; slow. September.

Dominie. (Well's English Red Streak). Medium, skin greenish yellow; flesh very tender and pleasant; tree vigorous and prolific. October to December.

Fameuse. (Snow Apple). Medium size, roundish, oblate; whitish ground, striped with deep red; flesh very white, juicy and pleasant. October and November.

Fall Queen. (Buckingham). Large to very large, oblate, greenish yellow striped with dull red, tree productive and hardy; fruit very tender, juicy and excellent; free. September and October.

Fall Wine. Medium, dark red, flesh white and unexcelled in quality. October.

Fall Winesap. Origin unknown; tree a free clean grower, moderately spreading, somewhat drooping as the tree acquires age; productive and an early bearer; fruit medium, roundish, sometimes slightly conical; yellowish green, with considerable blush in the sun; flesh white, fine grained, tender, juicy, sub-acid, good; vig. October to December.

Flory's Bellflower. (Flory, Sheep Shire). Origin, Montgomery County, Ohio; tree upright grower; fruit medium, roundish, conical; rich golden yellow, with small patches of russet and minute raised russet dots; flesh yellowish, tender, moderately juicy, sub-acid; good; vig. September and October.

Haas. (Gros Pommier). Medium to large, slightly conical and somewhat ribbed; pale greenish yellow, shaded and striped with red; flesh fine white, sometimes stained, tender, juicy, sub-acid, good; bears early and abundantly; vig. September and October.

Hawley. Fruit large, roundish, oblate, conical; skin fine yellow, somewhat waxen or oily, and considerably dotted; flesh whitish, very tender, juicy, rich, mild, sub-acid; vig. September.

Hay's Wine. (Penna. Red Streak). Large, form angular, nearly round, a little flattened at ends; skin smooth, deep red, over a yellow ground; flesh yellow white, juicy and crisp; vinous, rich, and pleasant flavor; very good. September and October.

Lowell or Orange. Large, roundish, slightly conical; green, becoming rich yellow; surface oily; flesh yellowish white, sub-acid, excellent; good bearer; free. September.

Maiden's Blush. Rather large, oblate, smooth, regular, with a fine evenly shaded red cheek or blush on a clear, pale yellow ground; flesh white, tender, sprightly, with a pleasant sub-acid flavor; bears large crops; free. August and September.

Mother. Fruit medium, form roundish, slightly conical; color yellow, almost entirely overspread with light, clear, rich red, splashed and marked with many deeper shades, many minute light dots; flesh tender, juicy; rich, aromatic, sub-acid; best quality; tree slow grower. Sept.

Munson's Sweet. Large, pale yellow with red cheek; tender, rich and good; fine bearer; vigorous. September.

Porter. Rather large, regular, oblong, tapering to the eye; skin bright yellow, sometimes a dull blush in the sun; flesh tender, rich, sub-acid, flavor fine; productive; slow. September.

Rambo. Medium, yellowish, streaked with dull red and somewhat dotted; mild, tender and good; productive and vigorous. September to November.

Smokehouse. (English Vandevere). Large, yellow shaded; flesh yellowish; sub-acid flavor; tree productive and moderately vigorous. October and November.

***Wealthy.** An apple of fine appearance and quality, an early and profuse bearer; a good market apple of its season; tree hardy; its chief fault is killing itself by its early and excessive bearing; in size and beauty it equals Baldwin, and is a better dessert apple.

***Utter's Red.** Large, round, whitish and striped, very beautiful and excellent, sub-acid; tree vigorous, hardy, productive, requires dry soil; of great value north. September and October.

Yellow Bellflower. Large, yellow, with a red blush; very tender, juicy, sub-acid; moderate grower and bearer. October to December.

WINTER APPLES.

Arkansas Black. Origin, Bentonville, Arkansas; the tree is a beautiful upright grower, young wood very dark; fruit medium to large; fine flavor; beautiful dark color, almost black; flesh yellowish, slightly sub-acid, crisp; one of the best cooking apples; vig. January to July.

***Arkansas Beauty.** Size, large; color, a beautiful light crimson in the shade, darker in the sun, with indistinct splashes and stripes over the whole surface of darker crimson; flesh fine grained, whitish color, tinged with red and yellow; flavor a rich sub-acid, quality very good; tree a good grower, an early and abundant bearer; season late; an excellent keeper.

Baldwin. Large, roundish, deep bright red; juicy, crisp, sub-acid, good flavor; tree vigorous, upright and very productive of fair handsome fruit. November and December.

Ben Davis. (New York Pippin). Fruit medium to large, roundish; skin yellowish, splashed and striped and almost covered with red; flesh white, tender, moderately juicy, sub-acid; an excellent variety; tree very hardy, a free grower, coming into bearing early, and very productive; it blooms late in the spring, thereby often escaping late frosts; very popular in the West and Southwest. December to March.

Clayton. Originated in Indiana; flesh yellow, breaking, sub-acid; very good for both kitchen and market. January to March.

***Coffelt.** A seedling from the Ben Davis, which the tree resembles in habit of growth; it possesses all the good qualities of the Ben Davis with none of the bad; a good grower and an abundant and regular bearer; the fruit hangs well on the tree, is a good handler, above medium size; beautifully striped and splashed with red on yellowish ground, is a much longer keeper and is far superior to the Ben Davis in flavor.

***Delaware Red Winter.** Medium to large, bright red, highly colored; flesh fine grained, crisp, juicy, sub-acid, excellent; remarkable for its long-keeping qualities; thought by some to be identical to the Lawyer.

English Russet. Fruit medium size, very regular, slightly conical; pale greenish yellow, about two-thirds covered with russet; flesh yellowish white, firm and crisp, with pleasant, slightly sub-acid flavor; free. December to April.

Grime's Golden. (Grime's Golden Pippin). An apple of the highest quality, equal to the Newtown; medium to large size, yellow; tree hardy, vigorous and productive. November and December.

***Gano.** This apple was found by W. G. Gano in an old orchard planted by Eli Jacks near Parkville, Platte County, Missouri, and it is said that the seedlings were carried from Boone County, Missouri. It was named on February 20, 1886, by the Missouri Valley Horticultural Society, in honor of its President, W. G. Gano. In describing the fruit, L. A. Goodman, Secretary of the Missouri State Horticultural Society says: "The fruit is bright red on yellow ground (no stripes), large, oblong, tapering to the eye; surface smooth, polished; dots minute; basin shallow, sometimes deep; eye large, cavity deep, brown in color; stem medium to long, core medium, seeds large. Season, January to April." Tree very healthy, vigorous, hardy; having stood 32° below zero without injury. A rapid grower; large and spreading in orchard; fruit spurs numerous; shoots long, smooth, brown, with protuberances on the limbs like the Ben Davis; an early, annual and prolific bearer. The tree much resembles the Ben Davis.

***Gideon.** A new variety, of extraordinary hardness, and of great value both for cooking and eating; originated in Minnesota with Peter M. Gideon, one of the most experienced fruit growers; "Iron Clad." October to March.

***Gill's Beauty.** Originated on the farm of Wyatt Coffelt, Benton County, Arkansas; a strong grower and good bearer, good flavor and very handsome. December to February.

***Grand Sultan.** Flesh greenish white, tender, brisk, sub-acid; very good, excellent for cooking; tree a good grower and an enormous bearer. October to January.

***Hatcher's Seedling.** Originated in Franklin, Tenn.; tree an upright, thrifty grower, producing good crops annually; jucy, mild, sub-acid and rich; a late keeper and one of the most popular apples in Tennessee. January to March.

Huntsman's Favorite. Originated in Johnson County, Missouri; very large, golden yellow, with bright red cheek; nearly sweet, fine flavor, very aromatic; one of the best and highest selling market apples; tree very healthy and moderately productive; vig. November to January.

Hubbardston Nonsuch. Large, striped yellow and red, tender, jucy and fine; strong, good bearer vigorous. October to December.

chard _____ Year _____

_____ Date sized _____

ifty, unsymmetrical. Crop No. _____
e, serious, mild, slight, on nuts, on
rate, occasional.

	Grams.	Per cent.
16^s	_____	_____
15^s	_____	_____
14^s	_____	_____
13^s	_____	_____
12^s	_____	_____
11^s	_____	_____
10^s	_____	_____
TOTAL,	_____	

***Hyde's King.** Very large, handsome, yellowish green, good quality; a remarkable keeper. Time of keeping, all the year round.

***Iowa Blush.** Medium in size, roundish, conical, whitish, with red cheek; quality fine, tart; tree vigorous and hardy on the prairies. November to January.

Jonathan. Fruit medium, roundish, skin yellow, nearly covered with dark or lively red; fine grained, very tender and finely flavored; mod. October to December.

***Kentucky Streak.** (Bradford's best.) Fruit medium, conical, regular, deep mottled red, stripes obscured and scarcely visible, dots scattered, large yellow, flesh yellow, tender.

King. (Tompkins County.) Large and handsome, striped red and yellow, tree vigorous and productive. November and December.

Lawyer. Origin, Platt County, Missouri; large, dark, bright red, roundish, very showy; tree hardy; not productive; a late keeper. December to May.

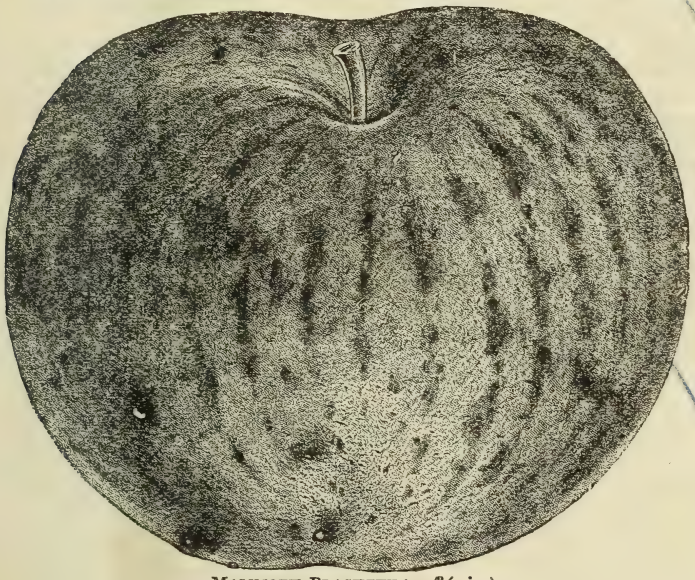
***Longfield.** One of the imported Russian varieties; a free, upright grower, early and abundant bearer, fruit medium to large, yellowish green, thickly covered with red stripes; a decided blush on the sunny side; rich, sprightly, sub-acid. December to March.

***Loy.** Originated in Howell County, Missouri. The original tree commenced bearing at five years old, bearing regular annual crops thereafter; fruit fully as large as the Ben Davis, and resembles Willow Twig in form and color; a beautiful red on yellow ground, deepening into a rich bronze or russet, with markings of minute black dots; small core, short stem, sprightly and pleasant flavor. December and January.

Lady's Sweet. A handsome red apple, jucy, sweet and good; one of the best; mod. Nov. to Feb.

Lansingburg. Tree upright, spreading and productive; fruit medium, roundish, oblate, yellow, largely overspread with grayish red, flesh firm, mild, sub-acid; good; valuable mainly for its long keeping qualities; vig. January to June.

Little Romanite. (Gilpin Carthouse). Tree very hardy and productive; fruit of medium size, roundish, oblong, skin very smooth and handsome, streaked with deep red and yellow; flesh yellow, firm, rich, becoming tender in spring; good; vig. February to June.



MAMMOTH BLACKTWIG. (⅔ size).

***Mammoth Blacktwig.** Originated in Tennessee. Tree a fine upright spreading grower, bears large crops and holds its fruit well; the fruit is fully one-fourth larger than the Wine Sap, which it resembles very much in color, flavor and keeping qualities; vig. November to April.

***Mann.** An upright grower, forming a round head, fruit medium to large, roundish oblate, skin deep yellow when fully ripe, with sometimes a shade of brownish red where exposed, flesh yellowish, juicy, mild, pleasant, sub-acid, good to very good; vig. April and May.

***McIntosh Red.** Fruit above medium, skin smooth, whitish yellow, covered with dark, rich red, flesh white, firm, very tender, juicy, mild, sub-acid and of the best quality, similar to Fameuse but larger; vig. November to February.

Minkler. Fruit medium, roundish, oblate, slightly conical, pale greenish yellow, striped and splashed with two shades of red, flesh yellowish, compact, moderately juicy, mild, pleasant sub-acid; tree irregular grower; vig. January to April.

Missouri Pippin. Large, oblong, bright red, with numerous gray dots, very handsome and of fair quality, an early and very abundant bearer, and very profitable orchard fruit; vig. December to March.

Northern Spy. Fruit large, conical, flattened, skin greenish yellow, striped and shaded with light and dark purplish crimson and covered with a thin white bloom; flesh white, fine grained, tender, very juicy; a pleasant sub-acid. November and December.

Nickajack. (Southern). Large, skin yellow, flesh tender, crisp and juicy, with rich sub-acid flavor; tree vigorous. November to April.

***Pewaukee.** Medium to large, roundish, somewhat flattened, bright yellow, streaked and spotted with dark red, flesh white, tender, juicy, sub-acid; a seedling from the Duchess of Oldenburg, and inherits its quality of extreme hardiness which makes it a most reliable kind in cold climates. December and January.

***Peter the Great.** A hardy and valuable Russian variety. Tender, juicy and pleasant flavored.

***Plumb's Cider.** Large, oval, striped, tender, juicy, sub-acid; tree very hardy, vigorous and productive; of most value north.

Rawle's Janet. (Never Fail). Medium, roundish, ovate, greenish yellow, striped with red, crisp, rich and juicy; one of the best and longest keepers in the South and Southwest; mod. January to May.

Roman Stem. Fruit medium, whitish yellow, splashed with russet; flesh tender, juicy; rich, musky flavor; fine dessert apple; mod. November and December.

Rhode Island Greening. Large, greenish yellow, tender, juicy and rich, with rather an acid flavor; growing strong and spreading, and an abundant bearer, but drops prematurely at the West, and should be gathered early if planted at all. November and December.

Rome Beauty. (Gillett's Seedling). Large, yellow, striped with red, flesh juicy, crisp, sub-acid, tree moderate grower. October to December.

Russet, Roxbury or Boston. Medium to large, greenish or yellow russet, crisp, good sub-acid flavor, productive, very popular on account of its long keeping; vigorous. December to May.

Stark. Fruit large, roundish, skin greenish yellow, shaded and striped with light and dark red, nearly over the whole surface and thickly sprinkled with light brown dots; flesh yellowish, moderately juicy, mild sub-acid; free. December to February.

Seek-No-Further. (Westfield). Medium to large, slightly russetted with dull red stripes, tender, rich, spicy and fine; good bearer; mod. October to January.

Smith's Cider. A handsome fruit, large, oblong, somewhat flattened, skin yellow, changing to red; flesh tender, juicy, crisp, with pleasant sub-acid flavor; vig. November to February.

Stanard. Medium to large, yellow, splashed and striped with red; good; a very handsome apple and a good bearer; a valuable market sort. December to April.

Shannon. Large, yellow, juicy, pleasant, sharp sub-acid, core small; mod. January.

***Shackleford.** Originated in Clark County, Missouri. The tree is a vigorous grower and a prolific bearer, better even than the Ben Davis; it flourishes on poor land with a clay sub-soil; apples large, highly colored and finely flavored; choice cookers and good keepers. Season December to May.

***Salome.** Flesh whitish yellow, half fine, tender, mild, slightly aromatic, very good January to May; its hardiness, long keeping, good quality, uniform size, retention of its flavor, quite late even into summer, will no doubt make it valuable for the West and Northwest. The tree is as hardy as any of the Siberian Crabs.

Shockley. (Southern). Medium or below, whitish yellow, marked with red; flesh crisp, juicy; tree vigorous. Valuable for its late keeping.

***Sutton Beauty.** Fruit medium to large, roundish, skin waxen yellow, striped with crimson; flesh whitish, tender, sub-acid, quality very good; tree a free, handsome grower and productive; flesh tender and juicy, good color and keeps late.

***Tewksbury Winter Blush.** A native of New Jersey. It is a handsome, fair fruit, with more flavor and juiciness than is usual in long keeping apples; this may be kept until August without particular care, quite plump and sound; tree grows rapidly and straight, and the fruit hangs till late in the autumn. January to August.

Tallman Sweeting. Medium, pale yellow, firm, rich and very sweet; the most valuable preserving and baking apple; vig. October to December.

Vandevere. Medium, yellow ground; flesh light yellow, rich, sub-acid flavor; good grower and early bearer. November.

Wagener. Medium to large, deep red in the sun, flesh firm, sub-acid and excellent, very productive, bears very young. October to December.

White Pippin. Large, roundish, greenish yellow, good quality, a fine orchard tree and very productive; an annual bearer of handsome and good fruit. December to March.

White Winter Pearmain. Large oblong, skin yellowish, flesh yellow, with a pleasant sub-acid flavor; tree vigorous, productive. January to April.

Willow Twig. Large, roundish, greenish yellow, striped with dull red; flesh firm, rather tough, early bearer and considered valuable in the South and West, where it is popular; profitable as a late keeper; mod. January to May.

Wine Sap. Medium, dark red, sub-acid, excellent, abundant bearer, a favorite market variety in the West; vig. November to April.

***Wolf River.** An apple peculiarly adapted to the West on account of its extreme hardiness; very large and handsome, flesh whitish, breaking, pleasant, sub-acid; a good bearer. Nov. and Dec.

***Walbridge.** Medium size, striped with red, handsome and of excellent quality; vigorous grower and productive; very hardy, and considered of great value in the North and Northwest. December to January.

Winter May. Fruit medium to large, roundish, conical, pale greenish yellow, slightly brownish in the sun, flesh whitish, fine grained, compact, not very juicy, mild sub-acid, core rather large and open, good; tree a bushy grower, good bearer, valued in Kansas. February to June.

Winter Sweet Paradise. Rather large, roundish, skin pale greenish yellow with a brown blush, flesh white, *very good* flavor, tree upright, bears well, fruit inclined to drop premature on some soils. December and January.

York Imperial. Medium, oblate, white, shaded with crimson, flesh firm, crisp, juicy and sub-acid; a good bearer and keeper, one of the best winter apples; mod. November to April.

CRAB APPLES.

The improvements in the varieties of the Crab Apple have kept pace with the other kinds of fruit. A few years ago it was regarded fit only for cider, preserves and jelly, but there are varieties now that command a good price on the market for dessert purposes; especially is this the case with the Whitney. Besides being useful, they are also very ornamental when in bloom, and also when loaded with their highly colored fruits.

The following are the most valuable varieties:

***Alaska.** Of Northern origin. Fruit large, almost white, tree hardy, vigorous grower. Highly recommended.

Briar's Sweet. A novelty in the line of crab apples, being sweet; vig. September.

Golden Beauty. Medium size, yellow, with red cheek; very handsome; mod. September.

Gen'l Grant. Tree a vigorous and upright grower, fruit large, red to very dark red, flesh white, tender, mild sub-acid, excellent for dessert; free. October.

Hewe's Virginia. A variety highly esteemed for cider. A poor grower.

Hyslop. Almost as large as Early Strawberry Apple, deep crimson, very popular on account of its large size, beauty and hardiness; vig. September and October.

Large Red Siberian Crab. About an inch in diameter, grown in clusters, yellow, lively scarlet cheek, bears young and abundantly; vig. August and September

Martha. A seedling of Duchess of Oldenburg, which originated in Minnesota. Earlier than the Transcendent; very ornamental as well as a fine fruit; bears in profusion every year. September and October.

Montreal Beauty. One of the most beautiful of the crabs, fruit large, bright yellow, shaded with red; flesh yellowish, firm, acid; tree a free grower. September and October.

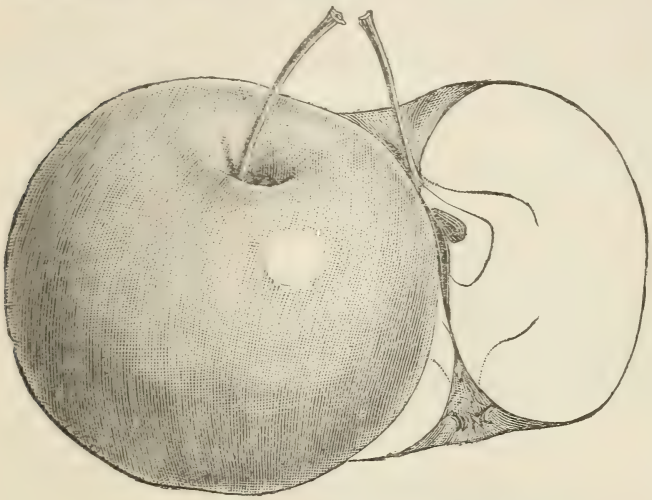
Quaker Beauty. A hardy, strong growing sort; bears large crops of fine fruit. December to May.

Queen's Choice. Fruit as large as Transcendent, but a little more elongated; bright yellow with a beautiful flush cheek; grown in large clusters, flesh fine grained, juicy and good; an early and abundant bearer. October.

Sweet Russet. Summer Sweet Russet. A very large crab, clear russet; an excellent summer variety. In Wisconsin they call it the finest summer crab; placed at the head of the crab list by the Wis. State Hort. Society. Sweet Russet is almost equal to a good pear in quality; and the best of its season.

Sylvan Sweet. Tree slender, upright, light colored wood, fruit large, pale yellow, with rich blush, flesh white, tender, very good and very beautiful. July.

Shields. A new crab from Wiscousin. Tree free from blight and a vigorous grower, fruit large to very large, red, splashed with yellow.



WHITNEY CRAB.

Transcendent. Tree productive, fruit from one and a half to two inches in diameter, excellent for sauce and pies, and is also a good eating apple; skin yellow, striped with red; vig. August and Sept.

Whitney's No. 20. Large, averaging one and a half to two inches in diameter; skin smooth, glossy green, striped and splashed with carmine; flesh firm, juicy and rich; a great bearer and very hardy. Tree a vigorous, handsome grower, with dark green, glossy foliage. Aug. and Sept.

PEARS.

The growing of this valuable fruit for both home and market purposes cannot be too strongly urged. It far exceeds the apple in its melting, juicy texture, rich refined flavor, and the range of varieties is such that by a judicious selection, the ripening season beginning in July can be continued in succession into winter. It is a mistaken opinion among some persons that standard pears are a long time coming into bearing. Many of the varieties begin to bear in four to six years after transplanting, and some of the newer varieties, such as the Kieffers, will produce fruit as soon as the dwarf pear, which is usually two to three years after transplanting. The pear when once in bearing seldom fails to produce a crop of fruit annually.

Gathering Pears. In order to retain the juice and best flavor, summer pears should be gathered at least ten days before they are ripe, and autumn pears at least two weeks; winter varieties as soon as the leaves begin to drop.

Thining the Fruit. When the trees are heavily laden the fruit should be thinned when about one-third grown else the fruit will be poor and the trees injured.

The letters, "D." and "S.," appended to the description of varieties, indicate favorable growth either as "Dwarfs" or "Standards" or both. Those designated as "moderate growers" are usually smaller trees.

SUMMER PEARS.

Notice. Those with star are of recent origin or introduction.

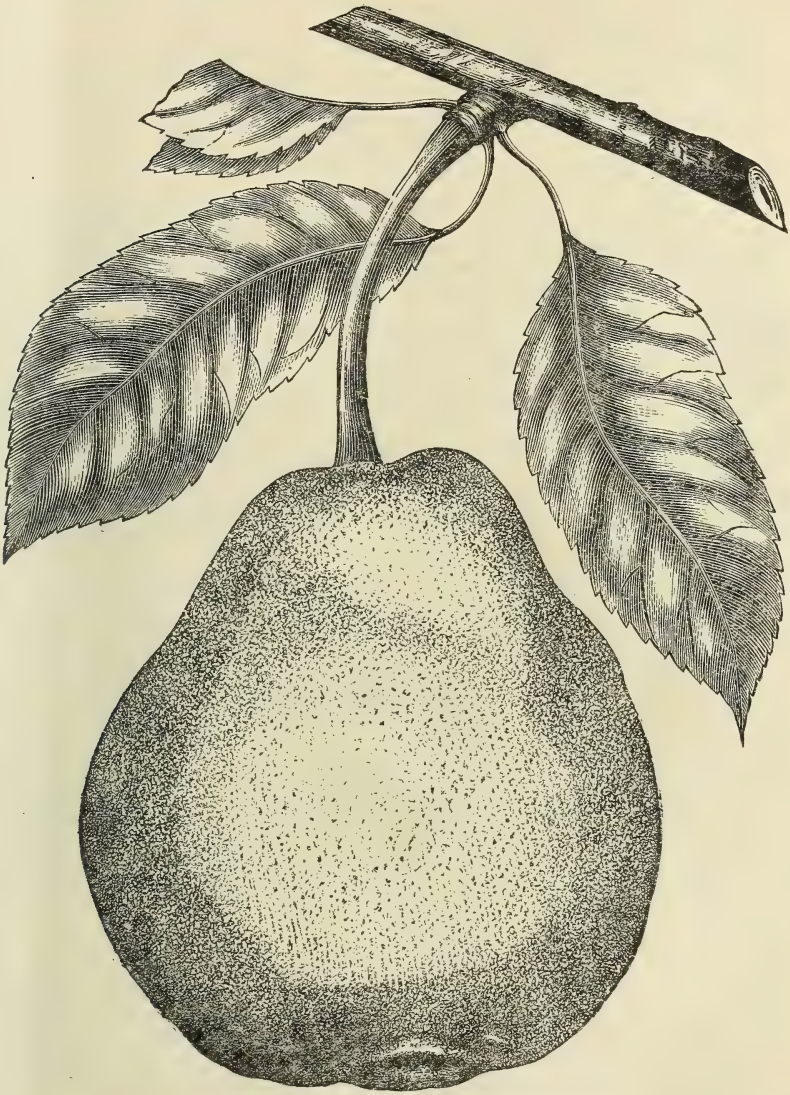
Bartlett. Large size, with often a beautiful blush to the sun; buttery, very juicy and high flavored, bears early and abundantly, very popular, D. and S. Vig. August.

Bloodgood. Medium, yellow, touched with russet, rich and delicious; first quality; D. and S. Free. July.

Beurre Giffard. An excellent variety, medium, greenish yellow, red in the sun, very early, very productive. D. and S. Mod. July.

Brandywine. Above medium, yellowish green, melting, sweet, productive, D. and S. Vig. July.

Brockworth Park, or Bonny D'Ezee. A new, large and beautiful pear, juicy, melting and excellent. D. and S. Free. August.



WILDER'S EARLY PEAR. (See next page.)

Chambers'. (Early Harvest, of Kentucky). Originated in Maryland and valued as a profitable early variety. Recommended by the Kentucky Horticultural Society as the *best* and most *profitable* market pear of its season. Fruit medium to large, rich, golden yellow, with red cheek next the sun, thickly covered with gray dots, D. and S. Mod. July.

Clapp's Favorite. Very, large, yellowish green to full yellow when ripe, marbled with dull red in the sun, and covered with small russet specks, vinous, melting and rich, D. and S. Vig. July.

Dearborn's Seedling. Nearly medium in size, light yellow sprinkled with small dots, juicy, melting and fine; an abundant bearer, D. and S. Free. July.

Doyenne D'Ete. Scarcely medium size, yellowish with a fine blush, juicy, sugary and rich, very early, fine on quince, D. and S. Vig. July.

Early Harvest. This variety originated on the Ohio river about 100 miles West of Cincinnati, where it is planted as a valuable market variety. The tree is very vigorous and long lived and more nearly free from blight than any other sort in cultivation. The fruit is large golden yellow with a fine red cheek, flavor poor, but it sells well in the market because of its size and color and earliness in ripening; ripens one month before the Bartlett.

Kingsessing. Large, greenish yellow, flesh juicy, buttery, with a rich perfumed flavor, D. and S. Vig. August.

***Lawson.** (Comet). Fruit large for so early a pear, the larger specimens measuring more than nine inches in circumference; sufficiently firm to insure its being a good shipper; of brilliant crimson color on yellow ground; flesh crisp, juicy and pleasant; yet like many of our most popular market fruits not of highest quality, but what it lacks in flavor is offset by its charming exterior, being one of the most beautiful things imaginable in the way of a pear. D. and S. July.

Mandeline. Medium, yellowish green, very juicy, melting, sweet; a fair grower and productive; D. and S. Vig. August.

Manning's Elizabeth. Small to medium; bears in clusters, crimson and gold color, very beautiful, melting, rich, sugary, sprightly perfumed flavor; excellent; very productive, one of the best early pears; vig. July.

Osband's Summer. Medium; yellow with red cheek, half melting, mild and pleasant, fine flavor and excellent; productive; D. and S. Free. July.

Souvenir de Congress. Fruit large to very large, resembling in form the Bartlett, skin smooth, of a handsome yellow at maturity, washed with a bright red or carmine on the side exposed to the sun; flesh much like the Bartlett, having the musky flavor, though in a less degree; D. and S. Mod. August.

Tyson. Medium size; bright yellow, cheek shaded with reddish brown, buttery, very melting, flavor nearly sweet, aroma excellent; D. and S. Vig. August.

***Wilder Early.** Size medium, greenish yellow, with a brownish red cheek and numerous dots; flesh white, fine grained, melting, excellent, about three weeks earlier than the Bartlett.

AUTUMN PEARS.

Buffum. Medium size; yellow, somewhat covered with reddish brown and russet, buttery, sweet, and excellent; D. and S. Vig. August and September.

Beurre Clairgeau. Large; yellow, shaded with orange and crimson, covered with russet dots, flesh yellow, buttery, juicy, sugary, perfumed vinous flavor. The size, early bearing, productiveness and exceeding beauty render this a valuable sort. D. and S. Mod. Sept. and Oct.

Beurre Bosc. A large fine pear; russety yellow, slight brownish red in the sun, flesh white, melting, juicy, sweet, perfumed, productive. S. Mod. August and September.

Bell Lucrative. Large, yellowish green, slightly russeted, melting and delicious; productive; one of the best. Free. August and September.

Beurre d' Anjou. Large greenish, sprinkled with russet, sometimes shaded with dull crimson, flesh whitish, buttery, melting, with a high, rich, vinous, excellent flavor, very productive, succeeds well on quince, should be in every orchard. D. and S. Vig. September to December.

***Cole's Pear.** Originated at Detroit, Kansas. The tree is a vigorous grower in nursery; young and annual bearer; has no core whatever, and is practically seedless. The leathery carpels which surround the seeds in ordinary pears and apples, are entirely absent. Quality good to best; size, medium to large; color, bright yellow when fully ripe; season September to November.

Duchess d' Angouleme. Very large, dull greenish yellow, streaked and spotted with russet, flesh white, buttery and very juicy, with a rich and very excellent flavor; on the quince, to which stock this variety seems well adapted, it is always fine; the large and fine appearance of this fruit makes it a general favorite. D. Vig. September and October.

Doyenne Boussock. Large, lemon yellow, a little russeted; melting, juicy, with a sprightly, vinous flavor. S. Vig. September.

Edmunds. Large, bright yellow, often marked with red in the sun; melting, sweet perfumed, good bearer. D. and S. Free. September.

Flemish Beauty. Large, beautiful, juicy, melting, rich and fine; good bearer; hardy everywhere. D. and S. Vig. August and September.

Frederick Clapp. Above medium, lemon yellow, sprightly, acidulous, rich, superior to Beurre Superfine; best. Free. September and October.

***Garber's Hybrid.** Is kin to and very much like Kieffer's; but is larger and of better quality, and ripens two or three weeks earlier. Is as yellow as an orange, immensely productive, bears at three years from the nursery. A valuable market fruit.

Howell. Large, light, waxed yellow, with a fine red cheek, handsome, rich sweet, melting, perfumed aromatic flavor. An early and profuse bearer. Very hardy and valuable. D. and S. Vig. August and September.

***Idaho.** A seedling, raised from a large, red-cheeked pear, by Mrs. Mullkey, of Lewiston, Idaho. The tree fruited the fourth year from the seed, and has borne annually ever since. It has survived winters when the thermometer ranged from 15 to 30 degrees below zero. The fruit is evenly distributed over the tree; sometimes in clusters. The combined weight of a cluster of four was 81¼ ounces; the largest weighing 23 ounces. Color, greenish yellow with russety spots; form, roundish; flesh, melting, juicy; flavor, good, rich, sprightly, vinous; core, exceedingly small and without seeds. Season September and October. Subject to blight in some localities.

***Kieffer's Hybrid.** This pear was raised from seed of the Chinese Sand Pear accidentally crossed with the Bartlett or some other kind grown near it. Tree has large, dark green glossy leaves, and is of itself very ornamental; is an early and very prolific bearer; the fruit is of good quality, wonderfully showy, and is valuable for the table and market; it never rots at the core, and is as nearly blight-proof as it is possible for any pear to be. S. Vig. September and Oct.

Louise Bonne de Jersey. Rather large, greenish yellow, with a bright, red cheek; juicy, buttery and melting, excellent; very productive. D. Vig. August and September.

***Le Conte.** Highly recommended, flesh melting, sweet, juicy and aromatic; this is one of the leading new sorts for the South, too tender North.

Onondaga. (Swan's Orange). A very large, melting and highly flavored yellow pear; vigorous and productive. September. D. and S.

Rutter. Fruit large and nearly globular; skin rough, greenish yellow, sprinkled with russet; flesh white, moderately juicy, nearly melting, sweet, slightly vinous; good bearer; very good; tree an exceedingly strong, vigorous grower, early and abundant bearer and not subject to blight. October and November.

Sheldon. Medium size, yellow on greenish russet, with a richly shaded cheek; flesh a little coarse, melting, juicy, with a very brisk, vinous, highly perfumed flavor; productive. S. Vig. Sept.

Seckel. Small; skin rich, yellowish brown when ripe, with a dull brownish red cheek; flesh very fine grained, sweet, exceedingly juicy, melting, buttery; the richest and highest flavored pear known; vig. August and September.

***Smith's Hybrid.** Resembles Le Conte in tree and fruit, but is of better quality and a little later. Superior to Le Conte and has the advantage of being hardy.

WINTER PEARS.

Deurre Easter. Large, yellow, sprinkled with brown dots, often dull red cheek; quality good; one of the best winter pears; best on quince. D. Mod. November to January.

Duchess de Bordeaux. Large size with a very tough thick skin, which renders it a most valuable keeper for winter use; flesh melting, juicy, rich. S. Free. November to February.

Lawrence. Rather large, yellow, covered with brown dots; flesh whitish, slightly granular, somewhat buttery, with a rich aromatic flavor, unsurpassed among the early winter pears; succeeds well on the quince; ripens with little care; should be in every orchard; tree healthy, hardy and productive. S. Free. November and December.

Mt. Vernon. Medium size, light russet, redish in the sun; flesh yellowish, juicy and aromatic; early bearer; a very good late pear. D. and S. Free. December.

Vicar of Wakefield. (Le Cure). Large, long, not first quality, but desirable for its productiveness; best on quince. D. and S. Vig. November and December.

Winter Nelis. Medium size, yellowish, green and russet; fine grained, melting, rich and delicious; one of the best winter pears; very productive. S. Mod. December.

PEACHES.

The Peach Tree requires a well drained, moderately rich soil—warm, sandy loam is probably the best.

In order to preserve the continued healthy growth of the tree and the fine quality of the fruit, the Peach should have the shoots and branches shortened in every year or two, so as to preserve a round, vigorous head; and the land should not be seeded to grass, but kept in constant cultivation.

The following have been selected as the best, including many new varieties which are indicated by a star prefixed. They furnish a succession for over four months, commencing about July 1st:

Arkansas Traveler. Said to ripen earlier than Amsden, of which it is a seedling; fully equal in every respect.

Alexander Early. Large size, well grown specimens measuring eight inches in circumference, handsome and regular in form, with deep maroon shade, covered with the richest tint of crimson, rich and good in quality with a vinous flavor; adheres to the stone; should remain on the tree until fully ripe. Last of June.

Amsden. Fruit medium; color red, beautifully shaded and mottled with a very dark red, nearly covering the greenish white ground; flesh white, with a delicious flavor when ripened on the tree. Middle to end of June.

Briggs' Red May. Above medium; very highly colored; flesh greenish white, very juicy, vinous, and of very good quality; adheres somewhat to the stone; of firm texture; tree very prolific. Ripens with the Amsden.

Barnard's Early. Medium to large, cheek purplish red; flesh yellow, red at the stone; juicy, sweet and rich; one of the very best yellow fleshed free stoned peaches. Middle of July.

***Bonanza.** Free, medium; flesh white, red cheek, fine quality, vigorous, productive, sure. For a really fine freestone, fifteen days later than Salway, we are at last rewarded by this true Bonanza to the peach grower. October.

Blood Cling. Large size, color dark claret, with veins, downy; flesh deep red, very juicy, fine flavor; tree an irregular grower. October.

Blood Free. Medium to large size, blood red throughout; tree hardy and a good bearer.

***The Champion.** Originated at Nokomis, Illinois; fruit large, beautiful in appearance; flavor delicious, sweet, rich and juicy; skin creamy white, with red cheek; freestone. August 15th. The peculiarity of this great acquisition is its hardiness, and the crowning events in its history of its having stood a temperture of 18° below zero in the winter of 1887-8, and produced an abundant crop the following season, and again in 1890 producing a full crop, when the peach crop was a universal failure.

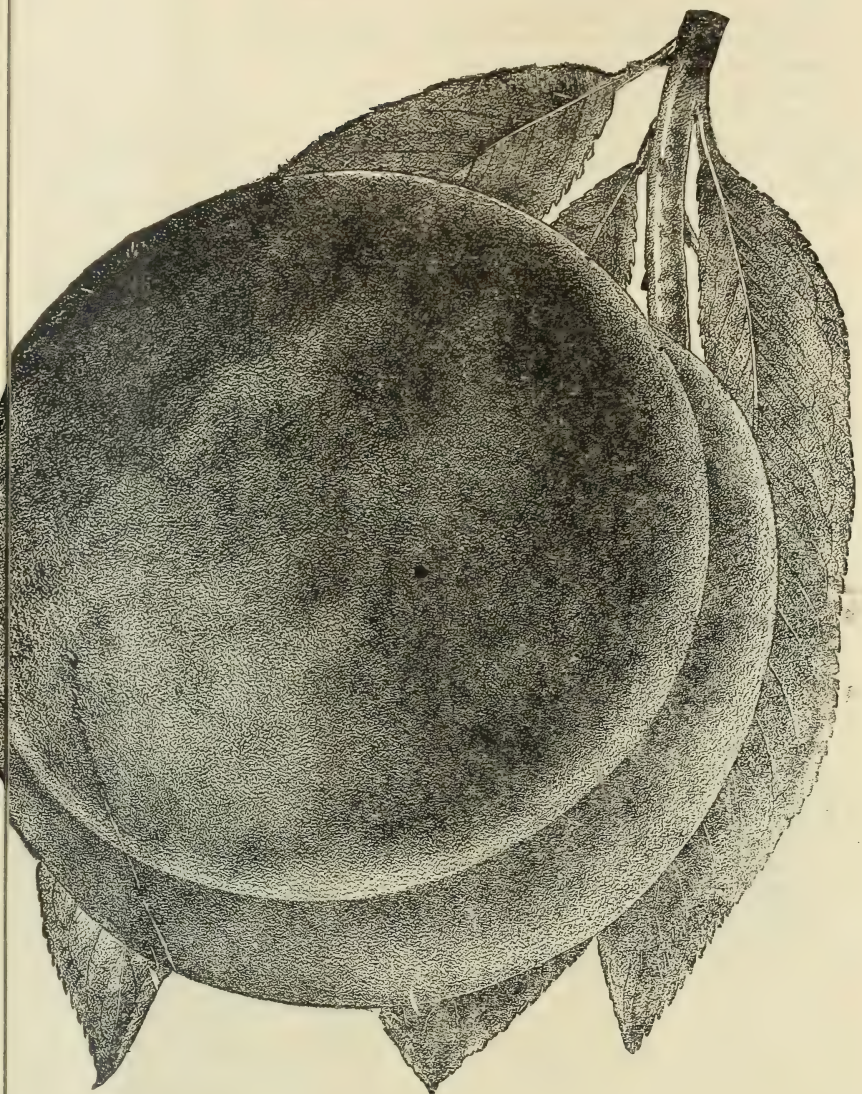
***Chinese Cling.** Most popular Southern peach, immense size, oblong, creamy skin, with faint flashes of red. August.

Crawford's Early. This beautiful yellow peach is highly esteemed for market purposes. Fruit very large, oblong; skin yellow, with fine red cheek; flesh yellow, juicy, sweet and excellent; productive; free. Last of July.

Crawford's Late. Fruit of the largest size; skin yellow, or greenish yellow, with dull red cheek; flesh yellow; productive; one of the best; free. Last of August and September.

***Crimson Beauty.** Cling, white flesh, one-half surface covered with bright crimson, very large, fine quality, vigorous; flesh slightly red close to the pit; prolific. Last of September.

***Chair's Choice.** Origin, Maryland; has no superior in quality and flavor, and for profit is without a rival; large, yellow, free, rich in color, flesh very firm, and ripens after Smock; great bearer.



Early Rivers. Large, light straw color, with delicate pink cheek; flesh juicy and melting, with very rich flavor. First of July.

*__Elberta.__ A Georgia cross between Crawford and Chinese Cling, very large, well colored; all things considered the finest yellow freestone in cultivation; no one can go amiss by planting it; fruit perfectly free from rot, and one of the most successful shipping varieties. August 20th.

*__Eldred Cling.__ Creamy skin, with red cheek, white flesh, large. July 15th.

Foster. Large, deep orange red, becoming very dark red on the sunny side; flesh yellow, very rich and juicy, with sub-acid flavor; earlier than Early Crawford; very handsome; free.

*__Family Favorite.__ Free, seedling of Chinese Cling, of better color, large, clear, waxen complexion with blush, prolific, firm, valuable for shipping, canning or drying. Last of July.

*__General Lee.__ An improved Chinese Cling; very valuable. August 20th.

George IV. Large, white with red cheek; melting, juicy and delicious; moderate bearer; free. First of August.

*__Globe.__ An improvement on Crawford's Late; fruit large, globular, of a rich golden yellow with a red blush, flesh yellow, juicy. August.

Honest John. Medium to large, yellow; flesh yellow and of good quality; tree vigorous and productive; free. Middle of August.

*__Henrietta.__ (Levy). The most magnificent yellow cling known, largest size, mostly covered with bright crimson, hardy, productive, sure bearer; always commands fancy prices. Sept. 25th.

Hale's Early. Fruit medium size; skin clear, smooth, white, delicately marbled with bright and dark red on the sunny side; flesh very melting, juicy, and high flavored. July 10th to 20th.

Heath Cling. Large, oblong, creamy white, slightly tinged with red in the sun; very tender, juicy, melting; very rich and luscious. September 15th.

Keyport White. Large, pure white, and white at the stone; hardy, a strong grower, and very prolific; more free from mildew and cracking than most white freestone sorts, and one of the best and most reliable of this class.

Large Early York. Large, white, with red cheek; fine grained, very juicy, rich and delicious; vigorous and productive; one of the best; free. First of August.

Lemon Cling. (Pineapple Cling). Large, oblong, having a swolen point similar to a lemon; skin yellow with red cheek; flesh yellow, firm, juicy and sweet; tree a fine grower. August.

Large Red Rareripe. A most excellent peach; fruit large; skin greenish white, dotted, and with a beautiful rich red cheek; flesh white, red at the stone; melting and juicy, with a sweet and rich flavor; free. August.

*__Lemon Free.__ Almost lemon shape, pointed at the apex, color a pale lemon yellow when ripe; it is of large size, the finest specimens measuring over twelve inches in circumference, of excellent quality, ripens after the Late Crawford, is immensely productive.

Mammoth Cling. Resembling Heath Cling, but double its size; originated in Southern Missouri. September 20th.

Mountain Rose. Large, red; flesh white, rich, juicy, excellent; one of the best early peaches, ripening with Troth's Early, and much larger and finer than that variety; should be in every collection. July.

*__Mrs. Brett.__ Free, large, white with red cheek; an improved Old Mixon Free; a little earlier and the finest in quality. August 20th.

May's Choice. Large yellow freestone, ripening with Reeve's Favorite, which variety it very much resembles, but is decidedly superior to it in size and appearance; prolific and a valuable market peach.

Old Mixon Cling. Large, pale yellow, with red cheek; juicy, rich and high flavored; one of the best clingstone peaches. August 20th.

Old Mixon Free. Large, pale yellow, with deep red cheek; rich and good; one of the best. Aug.

Picquet's Late. A Georgia variety of large size; yellow, with red cheek; flesh yellow, melting, sweet, of the highest flavor; freestone; a valuable acquisition. September.

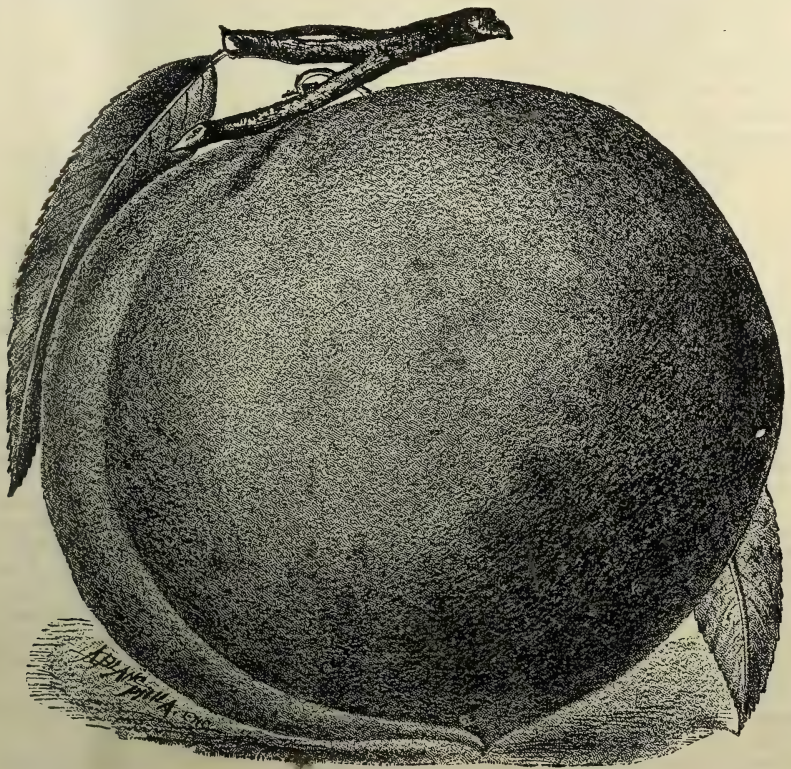
Ringgold Cling. Much larger than Heath, everyway an improvement on that popular kind. September 1st.

Reeve's Favorite. Fruit very large, round; skin yellow with a fine red cheek; flesh deep yellow juicy, melting and excellent; tree hardy and productive; one of the best and most reliable yellow market peaches. Last of July.

Salway. Fruit large, roundish, deep yellow, with a deep marbled brownish red cheek; flesh yellow, firm, juicy, rich and sugary; a new English variety; a late showy market sort; free. Last of September.

Smock Free. Fruit large, oval, skin orange yellow, mottled with red, a good market sort. Sept. 15th.

Sneed. The most remarkable early peach yet introduced; it ripens a week to ten days earlier than Alexander, and belongs to an entirely different type from Alexander and Hale's Early; it is very distinct in tree and fruit, belonging to the Chinese Cling type; size medium, color white with flush on cheek.



THE CHAMPION.

Stump the World. Very large, roundish; skin white, with a bright red cheek; flesh white, juicy and good; free. End of August.

Susquehanna. One of the handsomest peaches; large, yellow and red, melting, rich and good; origin, Pennsylvania; free. September.

Troth's Early. A very early and excellent peach of medium size; whitish, with a very fine red cheek; flesh juicy, sweet and very good; one of the most popular and profitable varieties for early marketing; free. Middle of July.

Van Buren's Golden Dwarf. Very ornamental; flowers small; fruit medium, golden yellow, with a rich, mottled carmine cheek; flesh yellow, firm, juicy, sprightly; cling. September.

Wager. Very large, yellow, more or less colored on sunny side; juicy and of fine flavor; free. First to middle of August.

Wheatland. Large, roundish, skin golden yellow shaded with crimson on the sunny side; flesh yellow, rather firm, juicy, sweet and of fine quality; tree vigorous. August.

Ward's Late Free. Medium to large; yellowish white, with a red cheek in the sun, flesh nearly white, juicy and good; valuable for late preserving; tree vigorous; free. September.

Wyandotte Chief. A fine early peach, ripens with Alexander, and of extra good size, and of finest quality.

Walker's Variegated. Free, large, white, striped, handsome, sells at sight, very vigorous. A most excellent variety for canners. September.

Wonderful. Originated in New Jersey, large to very large, uniform in shape and size, color rich golden yellow, overspread with carmine and crimson; flesh yellow, highly flavored and firm, bright red at pit, which is small and parts freely from the flesh. Ripe in October and keeps well.

Yellow Cobbler. Free, large, resembles Salway, but is several weeks later. It is the best very late peach. Origin, Grayson County, Texas.

Yellow St. John. Large, flesh yellow, equal in flavor to Crawford's; exceedingly valuable for an early market variety. Free. July.

PLUMS.

Diseases and Enemies of the Plum. The prevalence of the disease of the plum commonly known as the "Black Knot," which has so much discouraged people in the eastern states from giving to the plum its merited share of attention, has as yet done but little damage west of the Mississippi river, but its appearance should be guarded against, and its ravages prevented by keeping the trees in healthy condition, which is done by good cultivation, and removing the Knot by amputation on its first appearance. Nothing is more favorable to the growth of the black fungus or knot than neglect. But the great enemy of the plum is the insect known as the Curculio, a small, dark brown beetle which punctures the fruit in depositing its egg from which is hatched the destructive grub, and causing the fruit to drop prematurely and rot. Two ways of destroying this Curculio and saving the crop of fruit is recommended, viz:

First. Spread a large sheet prepared for the purpose under the tree and then jar the tree so as to shake down all fruits that have been stung, as well as all the Curculios; both insect and stung fruit are destroyed. Begin to do this as soon as the blossom falls, and keep it up daily, or at least tri-weekly until the fruit is half grown. The morning is the best time to do this when the insect is chilled and stupid.

Second. The best remedy and the one generally adopted now doubtless is the spraying of the trees, directions for which is given in the last pages of this catalogue. If those who really desire to grow fine crops of this most delicious fruit will try either of these systems and follow it up rigidly they will be successful.

Bradshaw. Fruit very large; dark violet red; flesh yellowish green; juicy and pleasant; productive. Vig. Middle of August.

Coe's Golden Drop. Large and handsome; light yellow; firm, rich and sweet; one of the best late plums. Mod. September.

Damson. Fruit small, oval; skin purple; covered with blue bloom; flesh melting and juicy, rather tart; separates partly from the stone. Mod. September.

Fellenburg. (Italian Prune). A fine late plum, oval, purple; flesh juicy and delicious; parts from the stone; fine for drying. Tree very productive. Free. September.

General Hand. Very large; oval; golden yellow, sweet and good. Vig. August.

German Prune. A large, long, oval variety, much esteemed for drying; color, dark purple; of very agreeable flavor. Vig. September.

Imperial Gage. (Flushing Gage, Prince's Imperial Gage). Fruit large, oval; skin pale green; flesh juicy, sweet, rich and excellent. Tree very productive. Vig. Middle of August.

Jefferson. Large, yellow; reddened in the sun; juicy, rich and delicious. One of the best. Mod. Last of August.

Large Golden Prolific. New; a seedling originated in Ontario, Canada, resembling in color and form, Yellow Egg, of which it is supposed to be a seedling, but of much better quality and more productive. The original tree bears free crops every year. We consider this a valuable acquisition to the list of plums. Sufficiently hardy for cultivation in Canada. Vig. Last of August.

Lombard. (Bleeker's Scarlet). Medium, round, oval; violet red, juicy, pleasant and good; adheres to the stone; productive. A valuable market variety; one of the most hardy and popular. Vig. Last of August.



SHIPPER'S PRIDE.

Lawrence's Favorite. Large yellowish green, remarkably juicy and melting. One of the best; productive. Mod. Middle of August.

Peach. Very large and handsome; dull red; good; very productive. Free. Last of August.

Pond Seedling. A magnificent English plum; light red, changing to violet; flesh rather coarse; abundant bearer. One of the most attractive in cultivation. Vig. September.

Purple Egg. (Hudson River Purple Egg). Highly esteemed by growers along the Hudson River; described as one of the richest and finest flavored plums we have; stone free, good size, resembles the German Prune—a little larger with a nice bloom; good bearer and brings a good price in market; tree bears young. Vig. September and October.

Quackenboss. Large, oblong, oval, deep purple; a little coarse, sprightly, juicy, sweet and excellent. Adheres slightly to the stone; productive. Valuable for market. Vig. October.

Shipper's Pride. This plum originated in northwestern New York, near the shore of Lake Ontario and has never been known to freeze back a particle in the severest winters. Size large; color dark purple; flesh firm and excellent quality. Vig. First of September.

Smith's Orleans. Large size; reddish purple; flesh firm and juicy with a rich fine flavor; productive. Free. September.

Shropshire Damson. A plum of fine quality, as free from the attacks of the curculio as the Common Damson, and of the same color. The flesh is amber colored, juicy and sprightly. In market it has commanded nearly double the price of the Common Damson, and is enormously productive. Free. Last of September.

Washington. Very large; when ripe, clear yellow, marked with red; flesh firm, very juicy and excellent; very popular; productive. Free. Last of August.

Yellow Egg or Yellow Magnum Bonnum. Very large; egg-shaped; excellent for cooking; good and productive; Vig. Last of August.

NATIVE AMERICAN PLUMS.

NOTICE:—Those with star are of recent introduction.

***Arkansas Lombard.** Originated in Arkansas; trees are vigorous, spreading and enormous bearers. It is an improvement on the Wild Goose, and far superior in flavor. Fruit yellow, with red blush, firm, meaty and luscious. Ripens two weeks later than the Wild Goose. July.

Forest Rose. Growth like Miner.

Forest Garden. Large, nearly round, mottled red and yellow, juicy, very sweet and rich; tree a strong grower. July.

De Soto. Medium; bright red; sweet, rich, of fine quality. Extremely hardy and productive.



WOLF PLUM.

***Golden Beauty.** Round, large as Wild Goose; rich golden yellow; very firm; small seed, nearly free, excellent in quality, immensely productive, free from curculio, large, light, glossy green leaves, young wood, yellow when mature; endures drouth well. This plum is astonishing all who see its ropes of rich golden fruit, vieing with the apricot in quality. September.

Miner. (Townsend). Medium size; oblong, skin dark, purplish red; flesh soft, juicy, vinous and adheres to the stone; excellent for canning and cooking, and esteemed for market; productive.

Mariana. Fruit large; round, of a singularly rich red color and most magnificent appearance; is not blown off by winds; skin rather thick; stone small, quality excellent; good for shipping and market. July. Free. A good grower.

***Pottawattamie.** Perfectly hardy and an immense early annual bearer; fruit is yellow, overspread with a bright pink and prominent white dots; flesh yellow, luscious, good; ripens in July.

Quaker. Very large; globular; a little flattened at the end; purplish red blush over a whitish yellow ground; flesh yellow, crisp, juicy, rich, meaty, very firm, adheres to the stone. Vig. Middle of August.

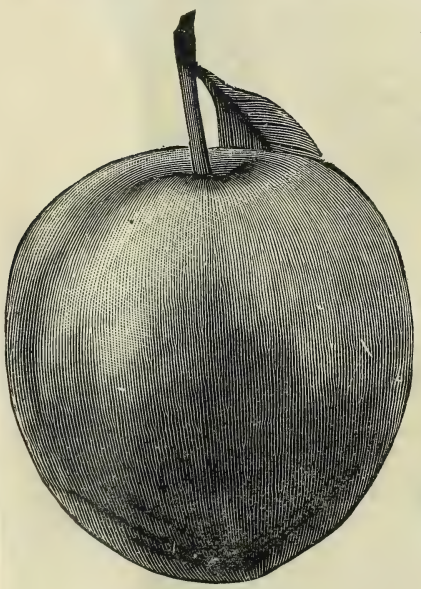
Weaver Plum. Flesh firm, rich, juicy, with a flavor resembling the apricot; stone free; early bearer and very productive; hardy and curculio proof. August.

Wild Goose. Large, rich, crimson, beautiful; flesh soft, rich, melting, delicious, with a full fruity flavor; tree a strong grower, prolific. This variety is among plums what the Ben Davis is among apples—referring to the American class of plums. July.

***Wolf.** Fruit nearly as large as Lombard and a perfect free stone; quality superb for cooking and for serving with sugar; tree a good grower, hardy, and is becoming very popular wherever known, promising to lead all other native plums. August.

JAPAN VARIETIES.

A unique class of Plums, of great beauty and productiveness. The fruit is exquisitely perfumed, with a charmingly attractive bloom. Trees are exceedingly ornamental, with smooth branches and rich, light green foliage, and quite distinct from other varieties, early and prolific bearers. The flesh is so firm and meaty that they can be safely shipped long distances, and kept for a long time in excellent condition.



BOTAN OR ABUNDANCE.

***Botan or Abundance.** This remarkable plum is being catalogued by some under the name of Abundance on account of its wonderful bearing qualities. It is one of the imported Japan varieties, the correct name being Botan. It is so remarkably strong and handsome in growth and foliage as to make it an ornament to any yard. It excels in early and profuse bearing. The fruit is large, handsome, showy and practically curculio proof; fruit beautiful lemon yellow ground, nearly overspread with bright cherry and with a heavy bloom; large to very large, oblong, tapering to the point; flesh orange yellow, melting, rich and highly perfumed. July.

***Burbank.** The best of all the Japan sorts of plums; nearly globular, clear cherry red with a thin lilac bloom. The flesh is a deep yellow color, very sweet, with a peculiar and very agreeable flavor; tree vigorous, with strong, upright shoots, large, broad leaves; commences to bear usually at two years. It blooms late and consequently more likely to escape the late spring frost.

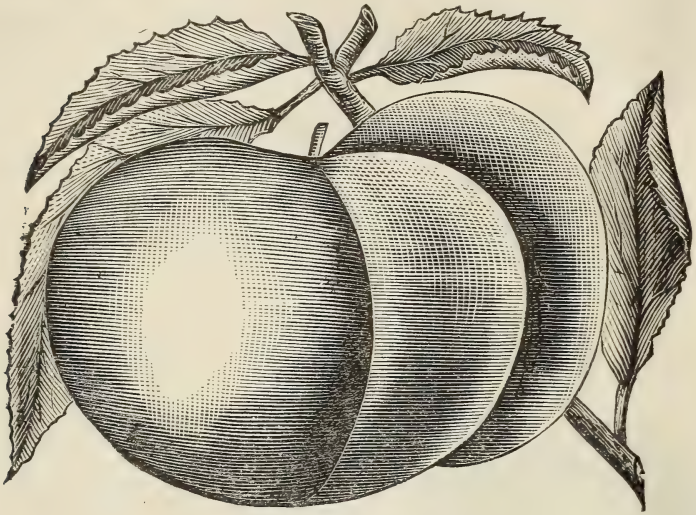
***Kelsey.** The pioneer of the Japan plums. Was brought into notice in 1891 by the late John Kelsey, of California, after whom it was named. Fruit very large, heart-shaped, being from seven to nine inches in circumference and specimens weighing six and a half ounces each; color a rich yellow, nearly overspread with bright red, with a lovely bloom; flesh firm, meaty, rich, of excellent quality; tree a fair grower, but not stocky, with long, willowy, light colored shoots. August and September.

***Ogon.** Large; nearly round, with deep suture, of a bright golden yellow, with faint bloom; flesh firm, sweet, rich and dry; tree vigorous and entirely hardy; excellent for canning. First of July.

***Prunus Simoni.** (Apricot Plum). This remarkable plum came from Northern China; fruit large, cinnamon red color; the flesh is firm, rich, sweet, aromatic, and delicious pineapple mingled with banana flavor; tree an upright grower, long hanging leaves, distinct. July.

Prunus Pissardii. From Persia; this is a very ornamental tree with purple foliage; fruit is medium in size: roundish, oval, dark crimson color, juicy and fairly good, but desirable for cooking; hardy and productive; free from curculio. For full description see ornamental trees.

Satsuma Blood. A fine large plum of the Oriental class, large as Kelsey, more globular in shape and from five to six weeks earlier; the flesh is solid, of a purplish crimson color from pit to skin, juicy and of fine quality; pit exceedingly small—very little larger than a cherry stone; tree a strong, vigorous grower with a brownish-red bark and lanceolate foliage.



PRUNUS SIMONI.

***Sweet Botan.** Said to be superior to the Botan or Abundance; the tree a marvel in prolificness, fruit reddish purple on sunny side, large, solid and said to be curculio proof.

CHERRIES.

A great deal of attention is now given to the growing of Cherries. No home orchard is complete without its proportion of Cherry trees, and it is one of the most profitable market fruits. It will succeed on any kind of soil that is not wet.

The Heart and Bigarreau varieties are not so much of a success in the West and Southwest as in the Eastern States, but the Dukes and Morellos succeed everywhere, especially the latter.

Cherries are now generally worked on the Mahaleb, a stock that does not throw up sprouts from the roots.

HEART AND BIGARREAU VARIETIES.

Black Eagle. Large black, very tender, juicy, rich and high flavored; productive. Free. Middle of June.

Black Tartarian. Very large, bright purplish black; half tender, juicy, very rich, excellent flavor, productive. Vig. First of June.

Downer's Late Red. Large, light red, tender, juicy and delicious; productive. Vig. Middle of June.

Early Purple Guigne. (Early Purple). The earliest fine variety; medium size, heart shape, tender, juicy and sweet; very hardy and productive. Free. May and June.

Gov. Wood. Raised by Dr. Kirkland, and one of the best cherries; very large, light red, juicy, rich and delicious. Tree healthy and a great bearer. Vig. First of June.

Luelling. A new variety from Portland, Oregon; said to be the largest cherry known; of very dark color and finest quality, flesh solid and firm, and adapted to long transportation. Free. Middle of June.

Napoleon Bigarreau. Very large, pale yellow or red; very firm, juicy and sweet; very productive; one of the best. Vig. Middle of June.

Ohio Beauty. (Dr. Kirtland). Large; mottled with dark and pale red, tender, juicy and fine. Middle of June.

Yellow Spanish. Large, pale yellow with red cheek; firm, juicy and excellent; one of the best light colored cherries; productive. Free. June.

DUKE AND MORELLO VARIETIES.

Belle de Choisy. Medium, amber, mottled with red; tender, juicy, sweet and rich. Vig. Middle of June.



LARGE MONTMORENCY CHERRY.

Bell Magnifique. Fruit large, roundish; skin bright red; flesh tender, juicy, sprightly, sub-acid; one of the finest of this class of cherries. Tree hardy and very productive. Free. July.

*Brusseler Braune. A variety much prized on the sandy plains of East Poland. A larger grower than Richmond, with good foilage. Fruit large, nearly round, purplish red in color, juice slightly red, flavor pure and quite acid. As it contains much grape sugar it is valuable for canning and drying. Later than English Morello.

*Dye House. This variety partakes both of the Morello and Duke, wood and fruit; a very early and sure bearer; ripens a week before Early Richmond; of better quality and quite as productive. Free. May and June.

Empress Eugenie. Fruit large, dark red, very rich, tender and sub-acid. A superior variety. Mod. June.

Early Morello. Brought from Germany to Kansas City with the Ostheimer, by Mr. Sauer. Fruit medium to large; black when fully ripe; tender, rich, vinous; ripens with Early Richmond; bears young, very productive; best early cherry.

English Morello. Medium to large; blackish red, rich, acid, juicy and good; very productive. Mod. July.

Early Richmond. (Kentish, Virginian or Early May). Medium size, dark red; melting, juicy, sprightly, acid flavor. This is one of the most valuable and popular of the acid cherries, and is unsurpassed for cooking purposes, and is exceedingly productive. Free. First of June.

*Girotte Imperial. A small tree and an early bearer. Foilage better than Richmond. Fruit large, dark red, inclined to conical, flesh and juice red. Flavor pure and free from bitter even when immature. Mild sub-acid when ripe.

Late Duke. Large, light red, late and fine. June and July.

Late Kentish. Fruit medium, round, deep red when ripe; very juicy, highly acid; one of the best for culinary purposes. Free. June.

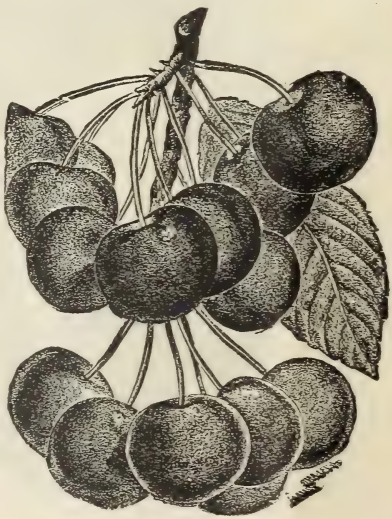
Large Montmorency. A large, red, acid cherry, larger than Early Richmond, and fully ten days later. Free. Middle of June.

Louis Phillipe. Very productive, fruit large, roundish, regular; color rich dark, almost purplish black red, flesh red, tender, sprightly, mild acid; good to best. Free. First of July.

Montmorency Ordinaire. Tree, a stout, but slow grower. Ellwanger & Barry say: "A beautiful, large, red cherry; larger and finer than Early Richmond, and ten days later. Being extraordinarily prolific and very hardy, it can be recommended as a variety of great value."

May Duke. Large, dark red, juicy and rich; not prolific. Free. First of June.

Ostheimer. (*Ostheimer Weichsel*). This magnificent late cherry was taken to Germany from Spain in 1814, and brought from there to Kansas City where it was beginning to attract much attention about the time the Ostheim, a much inferior sort, was heralded abroad; when without any apparent cause except the similarity in name, they were tacitly assumed to be identical—greatly to the loss of cherry culture generally. The Ostheimer has done remarkably well, and is the cherry for the west. Mr. G. F. Espenlaub, of Kansas, says: "The best, most valuable and profitable sort I have. Good grower, bears early, is very productive; fruit large, dark liver-colored when full ripe; juicy, rich, almost sweet."



OSTHEIMER. (⅔ size).

Olivet. A variety of French origin. Large, globular, very shining, deep red; flesh red, tender, rich and vinous; sub-acid flavor. Free. Middle of June.

Reine Hortense. Very fine; large bright red, juicy and delicious. Vig. Last of June.

Sappington. Originated at St. Louis, Missouri, where it is grown extensively for market, and is acknowledged to be of first quality. Earlier than the Richmond: a good bearer and a vigorous grower.

***Spate Amarelle.** Much grown for dessert and culinary use in East Poland and North Silesia, where it is noted for its regular and bountiful crops. Tree smaller than English Morello with pendulous habit. Trees from five to six feet in height have borne heavy crops of fruit. Fruit medium to large, color dark purple when ripe. Flesh and juice colored. It is excellent for canning, and when fully matured is desirable for dessert use. Season about the 20th of July.

***Wragg.** Originated in Iowa. Medium to large in size, long stem, dark purple when fully ripe. A variety well adapted for the high latitude and prairie regions of the northwest. July.

NECTARINES.

A most delicious, smooth skinned fruit, which thrives wherever peaches will grow, but it is liable to be stung by the curculio, and requires the same treatment as plums.

Boston. Large, deep yellow, with a bright blush and mottlings of red, sweet and peculiar, pleasant flavor; freestone; the largest and most beautiful variety known; hardy and productive. Vig. August.

Elruge. Medium size; pale green, with a dark red cheek; flesh pale green, very juicy and rich. Free. First of August.

Hunt's Tawney. Medium, pale orange; juicy, rich and excellent; very early and productive; the best of its season, and worthy of general cultivation on account of its hardiness; freestone. Vig. First of August.

Red Roman. Large size, greenish yellow, with a dark, dull, red cheek; flesh yellowish, fine and rich; productive. Vig. September.

APRICOTS.

A delicious fruit of the plum species, valuable for its earliness. It is liable to be attacked by curculio, and requires the same treatment as the plum; it bears immense crops; ripens in July and August.

***Acme.** A new Apricot from Northern China which was given to Prof. J. L. Budd by a returned missionary. The tree is an immense grower, very hardy and productive; fruit the very largest size; a sweet and delicious freestone; yellow with red cheek.

Breda. Small, dull orange, marked with red; juicy, rich and vinous; productive and hardy. Free. First of July.

Early Golden. (Dubois). Small, pale orange; juicy and sweet; hardy as the Russian Apricot, and productive. Vig. First of July.

***Harris.** A new variety, recommended for its good bearing qualities and extreme hardiness. It was brought into notice by orchardists at Geneva, N. Y., who prize it highly as a market variety. It is equal in size and quality to the best cultivated sorts and should take the place of the Russian Apricot.

Moorpark. One of the largest; orange, with a red cheek; firm, juicy, with a rich flavor; very productive. Vig. July.

Peach. Very large; orange, with a dark cheek; juicy and high flavored; similar to Moorpark. Vig. July.

Royal. Large; yellow, with an orange cheek; juicy, rich and delicious; a very fine variety, and well deserving a place in collections. Vig. July.

Russian Apricot. A new variety of recent introduction, valuable on account of extreme hardiness of trees and fine quality of fruit.

IMPROVED RUSSIAN VARIETIES.

***Alexander.** An immense bearer; fruit of large size, oblong, yellow flecked with red, flavor sweet and delicious; tree hardy; one of the best. July 1st.

*Alexis. Large to very large; yellow, with red cheek; slightly acid, but rich and luscious; tree hardy and abundant bearer. July 15th.

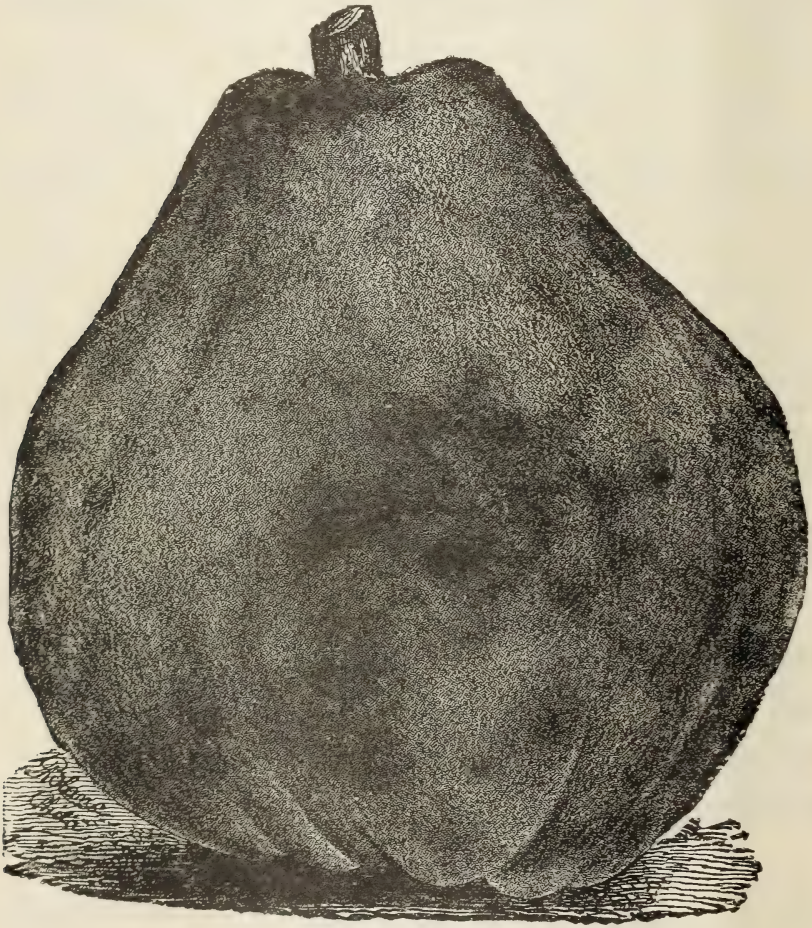
*Gibb. Medium size; yellow, sub-acid, rich and juicy; the best early sort, ripening with the strawberry.

*J. L. Budd. Of large size; white, with red cheek; flavor sweet, juicy, extra fine; a hardy, strong grower and profuse bearer; the best late variety. August 1st.

QUINCE.

The growing of the Quince, both for home and market purposes, is attracting a great deal of attention because of the many ways it can be made use of in canning, preserving and for flavoring other fruits, and also because of the remunerative prices it always brings on the market.

No fruit will give a more profitable return for the labor put on it than the Quince. It needs but little pruning, enough only to remove decayed or dead limbs and such as are encrouching on more important branches.



MISSOURI MAMMOTH.

It may be grown in a careless way, but to be more successful it requires peculiar cultivation. One of the best modes of cultivation for the Quince is given as follows:

Late in the autumn give the soil a top dressing with potash, or wood ashes, which is the best, though slacked lime or cow manure will do. Sprinkle some salt over the ground and then cover with a heavy mulching of straw or litter, say six or eight inches thick, to prevent the roots from severe freezing, and in the spring remove the mulching, placing it in piles near the trees, and cultivate the soil thoroughly until about the last of June or first of July, at which time replace the mulching, which should again be removed in October and replaced about one month later after the ground has been top dressed as above directed, and continued in this way from year to year.

Apple or Orange. Large, roundish; bright golden yellow; cooks tender and is of very excellent flavor; valuable for preserves or flavoring; very productive. September.

Champion. A variety originated in Connecticut. The tree is a prolific and constant bearer; fruit averaging larger than the Orange, more oval in shape, quality equally fine and a longer keeper. Vig. October and November.

Missouri Mammoth. The largest Quince in cultivation. Brought into notice in the vicinity of Kansas City, Mo., where it is fruited extensively, and is attracting great attention on account of its being large in size, perfect in shape, very rich and aromatic; tree vigorous, productive, an early bearer and free from blight.

Meech's Prolific. This is *preeminently* prolific and vigorous; young trees bearing profusely, large, beautiful golden fruit as handsome as the finest oranges; flavor unsurpassed.

Rea's Mammoth. A seedling of the Orange Quince; one-third larger; of the same form and color; fair, handsome, equally as good and productive. Free. October.

MULBERRIES.

Downing's Everbearing. Color blue black; flesh juicy, rich, sugary, with a sprightly, vinous flavor; tree ornamental as well as fruitful.

Hick's Everbearing. Wonderfully prolific. Said to be superior to the Downing.

New American. Fruit of the largest size, black, delicious in flavor; an attractive lawn tree, with very large leaves; of rapid growth; hardy.

Russian. This makes a good shade and ornamental tree; growing full and symetrical; holding its leaves late in the Autumn. It is a very rapid grower, bears fruit at two or three years of age, and every year. Color of the fruit varies some, but is generally black; very valuable.

White Mulberry. Fruit white and very sweet.



RUSSIAN MULBERRY.

DWARF SERVICE OR JUNEBERRY.

Grows four to six feet high, bunches out from the ground like currants—resembles the Common Service or Juneberry in leaf and fruit, but the fruit is larger, and in color almost black—commencing to bear the second year after transplanting, and bears profusely—no farm or garden should be without this most excellent dessert fruit.

ENGLISH CLUSTER HOP VINE.

This is said to be very much superior to any other variety in cultivation. Plants can be sent by mail if desired.

SCIONS AND BUDS.

Can be supplied of most varieties of fruits, etc. Prices given on application.

NUTS.

Almond, Hardshell. A fine hardy variety, with a large plump sweet kernel, tree very showy and ornamental in blossom. The hull cracks when ripe, permitting the nut to drop out.

Almond, Soft or Paper Shell. This is more desirable than the Hardshell wherever it will succeed, is not quite as hardy. Kernel large, sweet and rich.

Butternut, or White Walnut. A fine native tree, producing a large, longish nut, which is prized for its sweet, oily, nutritious kernel.

Black Walnut. This is the most valuable of all our timber trees for planting, a rapid grower, producing a large nut. The timber enters more largely into the manufacture of furniture and cabinetware than almost any other, and is prized almost with mahogany.

Chestnut, American. Our native species; smaller than the Spanish, but sweeter; very hardy.

Chestnut, Spanish. A tree producing nuts of very large size and good flavor; not quite as hardy as the American.

Chestnut, Japan or Giant. Introduced from Japan. The tree is decidedly ornamental, hardy and productive, of dwarf habit, bearing extremely young; nuts of enormous size, and of the sweet, rich flavor of the American Chestnut.

English Walnut, or Maderia Nut. A fine, lofty growing tree, with a handsome spreading head; it is scarcely hardy enough here, but further South it is a profitable tree to plant, as it produces large crops of excellent nuts.

Filbert, English. The fruit of these is so much larger and better flavored than our native species as to give them the preference for cultivation over the latter in localities where they will succeed.

GRAPES.

The history of the Grape is almost as old as that of man. Vineyards were extensively planted before orchards or collections of other fruit trees were at all common, and to-day it is one of the most highly appreciated fruits. In its flavor it is hardly surpassed by any other fruit in delicacy and richness, and few or none are more beautiful in the dessert. Any person having a lot of ground ever so small, either in country or city, can find room for from one-half to one dozen or more Grapevines. They can be trained up the side of any building or over a garden fence, but the best and cheapest way to grow them either in small or large quantities is on the wire trellis.

Work the ground deep and plant a little deeper than they were in the nursery. Make the rows eight feet apart and six to eight feet in the rows. Some of the tender varieties would be benefitted by laying the vines flat on the ground during winter, with a light covering of earth or litter.

The new varieties are indicated by a star prefixed.

SELECT VARIETIES.

BLACK GRAPES.

***Bacchus.** Very hardy in wood, leaf and fruit; very productive, bunch compact, about six inches long, berry medium in size; pulp half tender, juicy and sprightly.

Champion. Bunches large and compact; berries large, covered with a rich bloom; medium in quality; vine a strong and healthy grower and a good bearer; profitable for market on account of its earliness.

Clinton. Bunches medium size, compact shouldered; berries small; flesh acid vinous flavor. Vines hardy, vigorous, productive, but improves by hanging long on the vines.

Concord. Bunches large, berries large, round; skin thick and covered with bloom; flesh juicy, sweet. Vine very hardy, vigorous and productive; at present the most popular of all our native sorts.

Cynthiana. Very similar to Norton's Virginia; always reliable, one of the surest grapes we have; keeps remarkably well, and is very sprightly and spicy; a good grape for winter use.

Eumelan. A medium sized, hardy, productive, melting grape; bunches compact, shouldered; flesh tender, sweet, sprightly and vinous; ripens early.

***Early Victor.** In bunch and berry it is rather below the average, but ripens very early, is very pure in flavor, with very little pulp, is exceptionally sweet, sprightly and vinous; never cracks, and adheres firmly to the bunch.

Hartford Prolific. Valuable in Northern localities. Bunches large, compact, shouldered; berry large, round; skin thick; flesh sweet, juicy; vine vigorous and exceedingly productive. Ripens two weeks before the Concord.

Herbert. (Rogers' 44). Bunch large, compact; berry large, tender, sweet and rich; early and productive; a handsome variety.

Ives. Hardy and productive; valuable for market on account of its earliness.

***Jewell.** Seedling of Delaware; the earliest and best grape of high quality; fully tested, bunch medium; shouldered, compact; berry medium; skin rather tough, slightly pulpy, sweet, rich, sprightly, vinous, of the best quality; vine not vigorous until fully established; free from rot and mildew; will hang on vine long after ripe, and ships well.

Merrimac. (Rogers' No. 19). Bunches large; berries very large, round; one of the best.

***Moore's Early.** A large black grape of the Concord type, the entire crop ripening before the Concord; bunch medium, berries large with blue bloom; flesh pulpy, of medium quality. Vine hardy, moderately productive, better as it attains age. Planted extensively as a market sort.

***Matchless.** Bunch very large, compact, handsome; berry very large, pure, sweet, sprightly, vinous, with a slight pulp; ripe about with Jewel; hardy, healthy, vigorous, and productive; free from rot and mildew; will hang on the vine long after ripe.



MOORE'S EARLY.

Norton's Virginia. Well known as one of the most reliable and healthy wine grapes; will also keep well for winter use, and though small is very sprightly.

***Ozark.** Of *æstivalis* type; large in bunch as Concord and almost as large in berry; a prodigious grower. The fruit hangs on the vine until cut; a rich, meaty grape, of a peculiarly pleasant flavor; hardy, healthy, and productive; free from rot and mildew; valuable for late market.

***Paragon.** Bunch large, shouldered, compact, handsome; berry large, tender, sweet, rich, sprightly, vinous, without pulp; a bag of delicious juice; hardy, healthy, vigorous, and productive; free from rot and mildew; ripe with Concord but hangs well; valuable table and market grape.

***Superb.** Bunch medium, compact; berry medium, tender, without pulp, sweet, rich, sprightly, vinous; quality excellent, vine hardy, healthy and productive; free from rot and mildew; very early.

***Superior.** Bunch medium, compact, handsome; berry medium, very tender, sweet, rich, sprightly, vinous, without pulp; quality best; ripe about with Jewel; vine very strong grower, hardy, healthy, and productive; free from rot and mildew.

Telegraph or Christine. Early; good quality, and hangs to the bunch well; bunch medium, very compact; berry medium, with blue bloom; productive and desirable.

Wilder. (Rogers' No. 4). Perhaps the most valuable of the black hybrids, as it is healthy, strong and of excellent quality, also very productive; bunch heavy, shouldered, often weighing a pound; berry as large as Black Hamburg; round, thin skin, tender pulp, juicy, sweet and sprightly; ripens before Concord.

***Worden.** This variety is a seedling of Concord, which it greatly resembles in appearance and flavor, but the berries are larger, the fruit is better flavored and ripens several days earlier.

RED GRAPES.

Amber. (Taylor Seedling No. 8). Bunch large, shouldered, moderately compact; berry medium, oblong, pale amber when fully ripe; sweet, juicy, very tender pulp; thin skin; very fine flavor; very productive, hardy and healthy; late.

Agawam. (Rogers' No. 15). Large, round, early and of great vigor of growth; rich, high, peculiar aromatic flavor; very much subject to disease, and too high flavored, where all its aroma is developed, to be very desirable.

Amber Queen. Very early, hardy and a strong grower; tender to the center and small seeds; bunch large and shouldered like the Hamburg; berry large, frequently oblong, holds persistently to the bunch, and with proper care will keep all winter. August and September.

Brighton. A cross between the Concord and Diana Hamburg; bunches large, berries of medium size; flesh sweet, tender, and of the highest quality; ripens early; purple.

Catawba. Well known as the great wine grape of Ohio, Kentucky, etc.; bunches large and loose; berries large, of a coppery color, becoming purplish when well ripened; late, good, but liable to rot.

Delaware. Still holds its own as one of the finest grapes; bunches small, compact, shouldered; berries rather small, round; skin thin; flesh very juicy, without any hard pulp; an exceedingly sweet, spicy and delicious flavor; vine moderately vigorous; very hardy and productive.

Dracut Amber. Vine vigorous and productive; bunch large and long, compact, often shouldered; berries large, round; skin thick, of a pale color; very good.

***Eureka.** Seedling of Delaware; bunch large, shouldered, compact; berry medium, rich, sweet, sprightly, vinous; vine hardy, healthy, fair grower and productive; free from rot and mildew.

***Ideal.** This fine red grape is one of Mr. Burr's seedlings of the Delaware, and is as large in bunch and berry as Concord and better in quality than Delaware; good grower, hardy, healthy and very productive; rots and mildews in some localities; this is no doubt the finest red grape, of large size, and wherever it can be successfully grown is very desirable.

Iona. (Dr. Grant). Bunches large, long, somewhat shouldered and loose; berries medium, of a fine, clear wine color; skin thin; flesh tender, without pulp, with a sweet, brisk, vinous flavor.

***Jefferson.** Bunch large, shouldered, often double shouldered, compact; berry medium to large, roundish, oval; skin rather thick, light red, with a thin lilac bloom; flesh meaty, yet tender, juicy, sweet, slightly vinous, aromatic and rich; a handsome, excellent grape, either for market or home use; ripens about the time of Concord.

Lindley. (Rogers' No. 9). Bunches of medium size, rather long, compact; berry medium size, roundish; flesh tender, juicy, sweet and good; ripens a little before the Concord.

Massasoit. Bunch medium size, shouldered; berry large, round, claret red; flesh tender and juicy; ripens with the earliest sorts; vine a good grower and quite hardy, and one of the best varieties for a cold climate.

Perkins. As early as Hartford; pale, with lilac bloom; sweet; fair quality; very productive and healthy.

*__Perfection.__ An early grape of the best quality; bunch long, shouldered, compact; berry medium, sweet, rich, sprightly, vinous; vine hardy, healthy, vigorous and very productive; free from rot and mildew.

Poughkeepsie Red. A cross between Delaware and Iona, of high quality and very handsome; larger than Delaware.

Salem. (Rogers' No. 53). Bunches large and compact; berries large, round; flesh tender, juicy, sprightly, sweet and good; ripens soon after the Delaware.

Vergennes. A Vermont seedling; hardy, vigorous and productive; quality good.

Wyoming Red. A very early, medium sized red variety; bunch small but compact; skin bright red, sweet, very agreeable were it not for the slight foxy odor apparent when first gathered.

WHITE GRAPES.

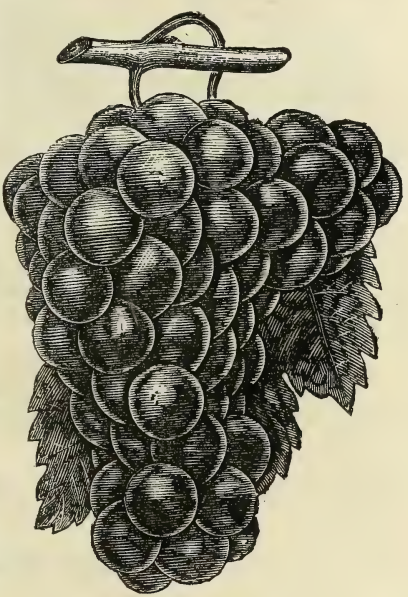
Elvira. Ripens about with Catawba; a very strong, healthy and robust grower, very productive; bunch and berry of medium size, and very compact.

*__Empire State.__ (Rickett's). A seedling from Hartford Prolific fertilized with the Clinton, hence very hardy and vigorous; bunches large, long, shouldered; berry medium to large; flesh tender, juicy and rich, with a slight native aroma; ripens very early, and continues a long time in use.

*__Eclipse.__ Bunch large, double-shouldered, not very compact; berry very large, tender, rich, sweet, sprightly, vinous, of excellent quality; vine hardy, healthy, very vigorous and productive.

Golden Pocklington. Is a seedling from Concord; vine hardy, both in wood and foliage; strong grower; called a white grape, but the fruit is a light golden yellow, clear, juicy and sweet to the center, with little or no pulp; bunches very large, sometimes shouldered; berries round and very large and thickly set; *quality, when fully ripe, much superior to Concord:* ripens with the Concord.

*__Green Mountain.__ (Winchell). This extra early delicious grape was found growing on the side of the Green Mountain in Vermont, at an altitude of 1,400 feet; supposed to be a chance seedling; color greenish white; skin very thin; pulp exceedingly tender and sweet; contains but one to two seeds only, which separate from the pulp with slightest pressure; quality superb.



GOLDEN POCKLINGTON.

Goethe. (Rogers' No. 1). This is for the West decidedly the best of all the Rogers' Hybrids; bunch medium, rather loose, shouldered; berry very large, oval, very good, already when yet white, when it resembles the White Malaga; pale red with beautiful bloom when fully ripe; thin skin; tender pulp; very juicy, sweet and delicious; ripens after Concord; exceedingly productive, vigorous and healthy, but should not be overtaxed when young, as like most of Rogers' Hybrids, it is apt to overbear; very fine for market and table.

Lady. A seedling of the Concord; of medium size, white and very good flavor; very early.

Lady Washington. (Ricketts'). Fruit yellow, tinged with pink; bunches very large, often weighing a pound; vine strong, very hardy.

Martha. A seedling of the Concord which it resembles in growth and hardiness; bunch of good size, and berry large, of pale green or light color; sweet, juicy, sprightly; ripens with Concord.

Missouri Riessling. A very hardy and healthy grape; bunch and berry medium, compact, pale yellow, changing to amber when very ripe; sweet, juicy and vinous; very tender pulp; quality best for table, and also makes very fine wine, resembling the famous Riessling.

Moore's Diamond. Very hardy, healthy and vigorous; ripens from 2 to 4 weeks earlier than Concord.

Niagara. A magnificent white grape and very valuable for both garden and vineyard; a rank grower and very productive of beautiful bunches of the largest size; berries large with a tough skin; quality good; ripens about with Concord.

White Jewel. Bunch medium, long, very compact, handsome; berry medium, very juicy, sweet, sprightly, of good quality; hardy, healthy, vigorous and immensely productive; free from rot and mildew; the earliest white grape.



MOORE'S DIAMOND.

RASPBERRIES.

Plant on strong soil, manure freely, cultivate well or mulch heavily. For field rows six feet apart, three feet in row. In garden culture, tie up to single wire. Cut out old wood each year.

RED RASPBERRIES.

Brandywine. An enormous producer; berry beautiful, highly colored and firm; the most valuable red Raspberry for transporting long distances, and brings a high price in market.

Cuthbert, or Queen of the Market. A remarkably strong, hardy variety, stands the Northern winters and Southern summers equal to any; berries very large, measuring three inches around; conical; rich crimson; very handsome, and so firm they can be shipped hundreds of miles by rail in good condition; flavor is sweet, rich and luscious.

Hansell. (The Earliest). Ten days ahead of all others, thus commanding the highest price in market.

Newark. Canes short, hardy as the hardiest, producing large crops of beautiful fruit; very firm, rendering it one of the best for shipping.

Turner. A beautiful red berry, of fine size and excellent quality; one of the hardiest and most productive varieties known.

***Thompson's Early Prolific.** An extra early variety, which has shown its value by its early season of ripening, productiveness and vigor of plant; it is admirably adapted for planting at the South.



CUTHBERT.

BLACK CAPS.

Earhart. Strong, stocky grower, with an abundance of stout, heavy spines; very hardy; fruit of large size, jet black and of good quality, commencing to ripen early and continues till stopped by freezing in the autumn.

Gregg. The leading late Black Cap and a popular market sort; canes of strong, vigorous growth and, under good culture, very productive; berries are large, covered with heavy bloom, firm meaty and of fine flavor; it requires a good strong soil to produce the best results; it is not entirely hardy, but suffers during unusually severe winters; it is by far the best late Black Cap and the largest of any.

Hopkins. Resembles somewhat, in fruit and cane, the old Mammoth Cluster, but an improvement upon it; canes very vigorous, healthy and productive; one of the best early Black Caps and worthy of a place in all collections. It is grown more extensively for the market in Western and Southern Missouri and Eastern Kansas than any other variety.

Johnston's Sweet. Its habits are superior to Souhegan, ripens about the same time, but bush more upright in growth; entirely hardy, very productive, berry nearly as large as Gregg, perfectly black, quite firm, holds its shape well in handling and shipping; in quality sweeter and more delicious than anything else in the Black Cap line; in canning and evaporating it retains its sweetness and flavor to a high degree.

Kansas. Originated at Lawrence, Kansas. It is healthy, vigorous and not subject to leaf blight; produces strong, healthy tips; fruit large, as fine a berry as Gregg and equally as good a shipper; ripens just after the Souhegan; very prolific.



Mammoth Cluster. A well known old variety, yet retained for its high quality and productiveness; rich and juicy with much bloom; canes strong and vigorous; medium to late.

Ohio. Highly recommended for canning or evaporating, and enormously productive; berry not quite as large as Gregg, but of finer quality and the plants more hardy, and bears heavy crops annually; claimed to be the most profitable of all.

***Palmer.** Early, ripening with Souhegan, but larger and more productive; it is said to bear larger crops even than Ohio; the canes are hardy and berries of good quality.

Shaffer's Colossal. Colossal, both in bush and berry; carries to market well; excellent to dry and unsurpassed for canning; berry dark crimson in color and excellent in quality; a very valuable variety; does not sucker, but roots from tips like Black Caps.

Tyler. (Souhegan). A leading early market variety, ripening its entire crop in a very short time; medium size, very black without bloom, flesh firm and sweet; plant vigorous, strong, hardy.

JAPANESE WINEBERRY.

This is an entirely new, distinct and valuable berry. It belongs to the Raspberry family, is a strong, vigorous grower, attaining the usual hight of the Raspberry and is said to be *perfectly hardy* in all positions without protection. Its leaves are of the darkest green outside, and silvery white underneath. The young shoots or branches are covered with a reddish-brown hair or moss. The fruit is borne in large clusters, often 75 to 100 berries in a bunch. These berries are from the time of formation and loom, until they ripen, enclosed in a "burr," which is formed by the calyx covering them entirely. When ripe the "burr" opens, exhibiting a large berry of the brightest, light glossy scarlet, or sherry wine color. The burrs and stems are covered with a heavy reddish moss LIKE A MOSS ROSE BUD. The flavor of the fruit is entirely different from any other berry, being very sprightly, sweet and juicy, having no disagreeable sour, but a delicate and luscious flavor peculiar to itself, and superior to other berries. It commences to ripen early in July and continues in bearing for a long time. It is the most prolific berry known, the bushes being literally covered with its luscious fruit. It is propagated from the tips like Cap Raspberries and Dewberries, and can be increased rapidly.



JAPANESE WINEBERRY.

GOOSEBERRIES.

In order to produce large, abundant crops of Gooseberries it is necessary to manure heavily and prune closely. The English varieties do not require much pruning. Mildew is prevented by close planting and heavy mulching. Plant three to four feet each way.

Downing. Fruit larger than Houghton; roundish, light green, with distinct veins, skin smooth, flesh rather soft, juicy and very good; vigorous and productive.

Houghton. A medium sized American variety, which bears abundant and regular crops, and never mildews; fruit smooth, red, tender and very good; very valuable.



INDUSTRY GOOSEBERRY.

Smith's. (Smith's Improved). Large, oval, light green, with bloom; flesh moderately firm, sweet and good; vigorous grower.

Golden Prolific. An American seedling of the English type said to be free from mildew; fruit large, deep golden yellow, very handsome and attractive; of excellent quality; hardy and a good grower.

Industry. The best English Gooseberry yet introduced; of vigorous, upright growth, and a greater cropper than any known variety, and much less subject to mildew than other English sorts; berries of the largest size, one and one-half inches in diameter, and of most excellent flavor, both pleasant and rich; color when fully ripe, dark red.

CURRANTS

Currants do best on a cool, sheltered, moist location. Plant about three feet apart. Rows four feet apart. Being perfectly hardy they can be planted in the fall and do not suffer injury from the winter. To destroy the Currant worm, dust the plants with White Hellebore when the dew is on; care should be taken not to breath the Hellebore as it causes violent sneezing.

Black Naples. Very large, sometimes measuring half an inch in diameter; fine for wine or jellies.

Black Champion. Bunches are very large and the flavor of the fruit particularly delicious; it hangs long on the bushes.

Cherry. The largest of all the red Currants; berries sometimes measuring half an inch in diameter, bunches short, plant very vigorous and productive when grown on good soils and well cultivated.



NORTH STAR CURRANT.



*Crandall. A native black seedling of the Western Wild Currant, and much superior to any of the named varieties yet introduced; distinct from the European black varieties and without their strong odor; wonderfully productive, a strong, vigorous grower, usually producing a crop next year after planting, large size, ½ to ¾ inches in diameter; easily picked; can be shipped farther and kept longer than any other small fruit; free from all attacks of insect enemies.

Fay's Prolific. Color deep red; a great bearer; stems longer than Cherry and berries hold their size to the end of the stem better; quality first-class, not quite so acid as the Cherry; claimed to be the most prolific and best of all red Currants.

La Versaillaise. Very large, red; bunch long, of great beauty and excellent quality; one of the finest and best.

Lee's Prolific. Black, large and of superior quality; vigorous and productive.

*North Star. The average length of the bunches is four inches; the berries from a single bunch, thirty in number, placed side by side, touching, covered a line twelve inches in length; the fruit is superior, very sweet and rich in quality, firm, a good market berry, desirable as a dessert fruit in the natural state and unequaled for jelly.

Red Dutch. The standard old variety; excellent and well known; a great bearer and a very profitable market sort.

Victoria. Large, bright red, with very long bunches; late; a good bearer.

White Dutch. An excellent and well known sort; good quality.

White Grape. Very large, yellowish white, sweet, or very mild acid, excellent quality and valuable for the table; the finest of the white sorts; very distinct from White Dutch, having a low, spreading habit and dark green foliage; very productive.

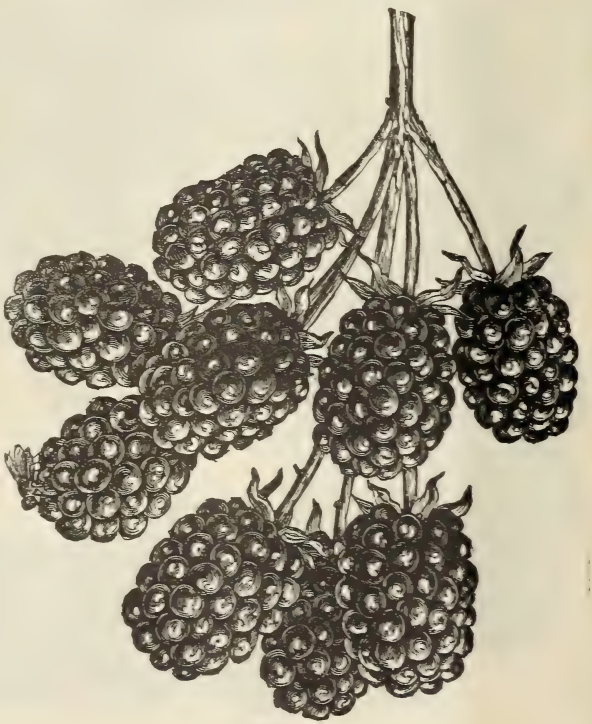
BLACKBERRIES.

Culture. In field culture plant in rows eight feet apart and three feet distant in the rows; in garden culture plant rows five feet apart and three feet distant in the rows. The pruning should be governed by the growth of cane and should be severe. Pinch back the canes in summer when three feet high, causing them to throw out laterals.

*Early Harvest. This is one of the earliest Blackberries in cultivation; a compact dwarf grower.

*Erie. Enormously productive; perfectly hardy; very large and of good quality; ripens in advance of Wilson Jr.; combines productiveness, hardiness, earliness, large size and good quality; five strong points of merit in its favor.

*Freed. Very hardy, productive and has never been known to rust.



SNYDER.

Kittatinny. Large, roundish; conical, glossy black, juicy, sweet; excellent when fully ripe; one of the most valuable sorts; rusts badly in some localities.

Lawton. Fruit is very large and black, and of excellent quality; an abundant bearer.

Snyder. Extremely hardy, enormously productive, medium size; no hard, sour core; only half as many thorns as Lawton or Kittatinny, and they are short; most prolific Blackberry grown.



THE ERIE.

Stone's Hardy. Upright grower, very hardy; the berry is black and glossy when ripe, and has a delicious flavor; it commences to ripen its fruit about five days earlier than the Snyder, and continues bearing ten days longer.

Taylor. One of the largest Blackberries grown; fruit of the best quality, melting and without core; very productive, and as hardy as the Snyder, which renders it very valuable.

Wilson's Early. Of good size, very early, beautiful dark color; of sweet, excellent flavor and very productive; ripens the whole crop nearly together; needs some protection in winter.

Wachusett Thornless. Fruit of medium size, oblong, oval, moderately firm, sweet and good; it is a good keeper, ships well, and valuable as a market berry; hardy and *almost free from thorns.*

Wilson's Junior. The largest and most productive early Blackberry known; produces its fruit in immense clusters; ripens evenly; becomes sweet as soon as black; holds its color well after being picked, and brings the highest price in the market; needs protection in winter.

DEWBERRY.

Lucretia Dewberry. Fruit very large, luscious and handsome; perfectly hardy, a strong grower and enormously productive; a superb and very profitable market fruit; the vines should be allowed to remain on the ground during the winter, and staked up early in the spring.



LUCRETIA DEWBERRY.

STRAWBERRIES.

Directions for its Culture. It is supposed that those who are entering into field culture of the Strawberry for market purposes without practical experience will hardly depend on the brief directions that can be given here; fuller instructions will be freely given upon application.

The Soil and its Preparation. The ground should be worked eighteen or twenty inches deep and be properly enriched as for any garden crop; drainage is necessary in very wet soil.

Cultivation. For family use, plant fifteen or eighteen inches apart each way, and after a few strong plants have set from runners then pinch off all runners as fast as they appear; keep the ground free of weeds, and frequently stirred with a hoe or fork. Plants treated in this manner will produce more crowns and therefore yield double the amount of well developed fruit than when runners are left to grow.

Covering in Winter. Where the winters are severe it is well to give the ground a light covering with coarse straw or litter. This covering should not be placed on until the ground is frozen. Fatal errors are made by putting on too much and too early. If coarse straw is used it may be left on until the plants have done fruiting, taking care to open it up around the plants early in the spring, so as to give them plenty of sunlight and air.

The blossoms of those marked with a letter (P) are destitute of stamens and are termed pistillate, and unless a row of a perfect flowering variety is planted at intervals not exceeding every third or fourth row, they will produce imperfect fruit, and but little of it; but when properly fertilized, as a rule, they are more prolific than those with perfect flowers.



STRAWBERRY PLANT WITH RUNNERS CUT.

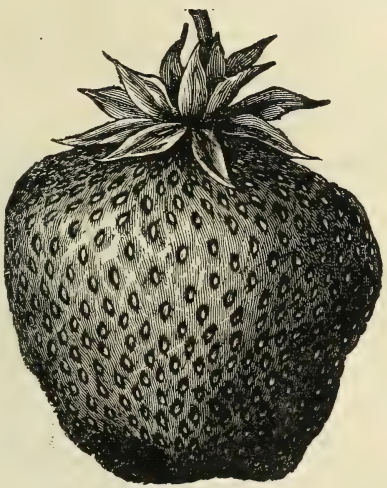
*Bubach No. 5. (P). A wonderful berry in vigor of plant and yield of fruit even under careless culture. The fruit is in many instances enormous, and the average is large and handsome. It is exceedingly productive and very valuable for a near by market. Midseason.

Crawford. From Ohio, and the originator thus describes it: "The plant is very large and stocky, dark green and free from defects. It has a perfect berry and is a good bearer. The fruit is large to very large, somewhat irregular at first but never coxcombed. Color bright glossy red and lighter within. The flesh is firm and of excellent quality."

Cinderella. A splendid early variety; berries large, conical, regular, bright glossy scarlet, firm, of excellent flavor; plant unsually vigorous and healthy.

Captain Jack. A most vigorous grower, healthy and productive; berries large, handsome and solid.

Cumberland Triumph. A magnificent variety; berries immense; fine, perfect form, and of fine flavor; plant very vigorous and moderately productive.



BUBACH NO. 5.

Crescent Seedling. (P). Medium size, bright light scarlet, not very firm; continues a long time in fruit; plant very vigorous and hardy, and will produce good crops under greater neglect than any other Strawberry, and is a good paying variety for both family use and market.

Charles Downing. Large, conical; crimson; flesh firm, of fine flavor and good quality; plant healthy, vigorous and productive.

Eureka. (P). Plant vigorous, of medium size, very prolific; large berry, of good quality, firm and of good shape; medium to late in ripening.

Haverland. (P). Profitable by reason of its productiveness and earliness, but it is hardly firm enough for distant shipment; requires deep, heavy soil; plant exceedingly vigorous and healthy; fruit large, handsome and good, though not of the best quality; rather long in shape and of a bright glossy crimson; early.

Jewell. (P). Season medium; size large; color bright red, changing to crimson when ripe; wonderfully productive; very firm.

Jessie. The plant is a stout, luxuriant grower; foliage light green, large and clean; the berry is very large, continuing large to the last picking; it is a beautiful color, fine quality, good form, quite firm, having been shipped 600 miles in good condition.



JESSIE STRAWBERRY.

Jersey Queen. Berry is very large, color a fine shade of scarlet; flesh firm and melting; full of rich vinous juice, with a deliciously spicy aroma; late, productive.

Lady Rusk. The fruit is of large size, several days earlier than the Crescent, and is its superior in every respect, holding size well throughout the entire picking, and above all, one of the most productive varieties.

Miner's Prolific. Somewhat similar to Charles Downing, but larger; darker in color; berries are of irregular shape, ridged and furrowed, of a mild, pleasant flavor; very productive; midseason.

May King. Strongly resembles Crescent, of which it is a seedling, both in fruit and plant; productive; firm; berry of the color and size of its parent, and of the same bright, showy appearance; valuable for market.

Manchester. (P). Size large, color scarlet, flesh pink, firm but melting, with a rich sub-acid juice and a decided aromatic flavor; robust and very productive; quality very good to best.

Michel's Early. Michel's Early is the earliest of all good and reliable Strawberries; it is two weeks earlier and is as productive as the Crescent; a perfect bloomer; size above medium to large and very uniform; color beautifully scarlet; shaped handsomely conical; quality very fine; pronounced by all who have tested it to be the finest—possessing the flavor of the wild Strawberry.

Parry. Seedling of Jersey Queen; the fruit is uniformly large in size, beautiful, moderately firm and of good quality; plant strong, vigorous and productive; requires good soil; early.

***Parker Earle.** Produced in Texas in 1886; plant very robust, strong penetrating roots, a model in makeup; endures well the long, hot, dry summers of Texas and in Michigan and New York stands the winter cold equal to any other variety; enormously productive, having for two years in succession, on the same bed, in light sandy soil, fully developed a crop at the rate of 15,000 quarts to the acre; flowers perfect, protected from late frosts by abundant leaves; trusses strong, long and large; berries regular, conical with short neck, glossy, scarlet crimson, firm, no hollow core, seeds golden; it shows well several days after picking, carries finely in long shipments, presents an attractive appearance in the crate and brings the highest price in market; season early to medium.

Sucker State. Fruit medium to large; regular shaped, conical; color somewhat like Cumberland Triumph, but darker and more brilliant; decidedly one of the finest market berries.

Sharpless. This is one of the very best varieties in certain soils; large in size, delicious flavor, good bearer, bright color; specimens exhibited weighed 1¼ ounces, and *measured seven inches in circumference.*

Warfield No. 2. (P). Quality pleasant, sub-acid, good; the plant is a vigorous grower with bright healthy foliage; early.

Windsor Chief. (P). A vigorous grower, with healthy foliage and immensely productive; fruit of large size to the end of the season.

ASPARAGUS.

To prepare a bed for planting, the soil should be dug deeply and well mixed together with well rotted manure or compost. Plant in rows two feet apart. In the rows the plants should not exceed a foot apart, and planted about four inches deep. Cover on approach of winter with manure, and fork the beds over lightly early in the spring.

Conover's Colossal. A mammoth variety of vigorous growth, sending up from fifteen to twenty sprouts each year, from one to two inches in diameter, color deep green, and crown very close.

Palmetto. It is earlier, a better yielder, more even and regular in its growth and in quality equal to that old favorite, Conover's Colossal.

FIGS.

Figs may be grown as bushes in the garden, in the Northern States, if they are taken up annually, the first week in November, with a ball of earth attached to the roots, and placed in a cellar till about the middle of May, when they should be taken out and replanted.

Brown Turkey. Brownish purple, large, rich and excellent.

Black Ischia. Medium; skin deep purple; flesh sweet, rich.

Celestial or Sugar. Fruit small, but very sweet.

RHUBARB, OR PIE PLANT.

This deserves to be ranked among the best early vegetables in the garden. It affords the earliest material for pies and tarts, continues long in use and is valuable for canning. Make the border very rich and deep.

Linnæus. Large, early, tender and fine; the very best of all.

Victoria. The best for market because of its giant growth.



ORNAMENTAL DEPARTMENT.

Suggestions to Planters. The extremes in temperature in this country are so great and the changes often so sudden that it is safe only to plant the most hardy ornamental trees and shrubs. Those varieties that will grow in the nursery when young without protection in winter may be regarded as safe to plant in parks and extensive grounds and in lawns and small places. Yet a few of the most beautiful sorts are not perfectly hardy and will be greatly benefitted by some protection during severe winters. A judicious selection from the many varieties given in this catalogue will enable the planter to accomplish his desire in securing that which will give him satisfaction both in hardiness and in effect.

For Parks and Extensive Grounds. In making selections of trees for this purpose there can be no difficulty, as there will be places for some of all the popular strong growing sorts as well as many places for the smaller and more ornamental varieties, which are frequently planted in groups, and when by a proper selection so that there may be a succession of flowering and a variety of coloring of the foliage in the autumn, they make a picturesque appearance. But it cannot be too strongly urged upon planters the importance and value of flowering shrubs for effective masses and groups. All of the hardy varieties, such as Althea, Forsythea, Weigelias, Calycanthus, Deutzia, Snowball, Hydrangia, Lilac, Syringa, Japan Quince, Fringe—purple and white—Daphine, Thornes, Almonds, Anemone, Pæones, Phlox and many others when arranged either in groups or properly distributed produce a magnificent effect, and what grand masses of bloom can be had throughout the season by proper use of the various families. The purple and variegated leaved trees and shrubs may also be planted in such a manner as to afford a rich and striking contrast.

For Lawns and Small Places. A little more care may be taken in making selections for this purpose, although the selections will depend very much on the size of the ground to be occupied. Where only a few trees and shrubs can be planted, the medium or small growing sorts, and those that display the finest appearance both in foliage and flowers should be used. While on larger places a more extensive assortment can be planted.

Evergreens. It is unnecessary to argue in favor of the planting of this noble species of ornamental trees. Their stately appearance have too often caught the eye of the admirer of beautiful landscapes, parks, lawns and home places and left its lasting impression on the mind, to be forgotten or overlooked in arranging the planting of even small grounds. Nothing is more beautiful than a well arranged group of select Evergreens, and when properly distributed singly over the grounds their appearance adds greatly to the scenery.

When and How to Plant, Prune, Etc. The same directions as are given in the front pages of this catalogue will apply to ornamental trees and shrubs. Spring is the best time to plant Evergreens, yet autumn planting is attended with success when properly protected during the winter. Little pruning is necessary on the Pines, Spruces, etc. It is necessary to shorten in to thicken the growth and preserve the shape and this should be done just before the buds begin to swell in the spring. Arborvitæs, Cypress, Junipers, Cedars, etc., can be shortened in or sheared any time during the growing season. Too much care cannot be taken to keep the roots of Evergreens from being exposed to the asmosphere while out of the ground, and a protection the first year from the sun and winds by a lattice work of thin lath will aid in securing the life and growth of many Evergreens.

DECIDUOUS TREES.

AILANTUS. (Tree of Heaven). **Glandulosa.** From Japan; a lofty, rapid growing tree, with long, elegant, feathery foliage, exempt from all diseases and insects; one of the most distinct of ornamental trees with pinnate foliage.

ALDER (*Alnus.*). **European** (*Glutinosa.*) A tree of rapid growth, suitable for damp soils, but thriving well everywhere.

Imperial Cut-Leaved (*Lasciniata Imperialis*). A very striking and beautiful tree, with delicate and beautiful cut leaves; hardy and of vigorous growth; one of the finest cut-leaved trees in cultivation.

Lasciniata (*Cut-Leaved Alder*). From Northern France; a very ornamental variety, with dark green and deeply serrated foliage.

ALMOND. Large Double-Flowering (*Amygdalus*). A beautiful little tree which bears a profusion of double rose-colored blossoms in the early spring.

ASH (*Fraxinus*). **European** (*Excelsior*). A lofty tree, with pinnate foliage and spreading head.

Gold Barked (*Aurea*). Growth irregular; very ornamental in winter.

Flowering (*Ornus Europœns*). A very ornamental dwarf tree; flower fringe like, greenish white, early in June; in large clusters on end of the branches.

Willow-Leafed (*Salicifolia*). A rapid stout growing tree, with narrow, wavy leaves; very ornamental.

Aucuba-Leaved (*Aucubœfolia*). A fine tree with gold blotched leaves.

American White. A rapid grower and valuable for planting in the street or in parks; may be exclusively planted for timber.

BEECH (*Fagus*). **Lacinta** (*Cut-Leaved*). Foliage deeply and finely cut.

Purple-Leaved (*Purpurea*). A remarkable species with deep purple foliage, changing to greenish purple in autumn; a very striking contrast with oramental trees.

Fern-Leaved (*Heterophylla*). Of elegant round habit, and delicately cut fern-like foliage; one of the finest lawn trees

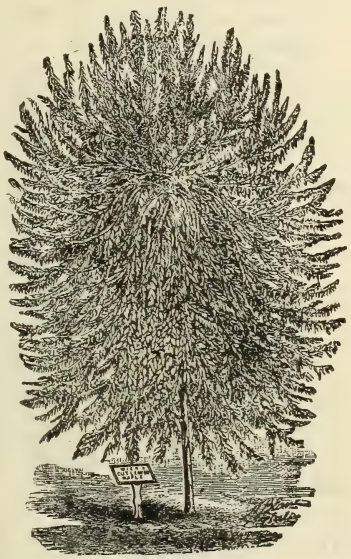
American (*Fagus ferruginea*). Our native sort, well known; one of the most picturesque of round-headed trees.

BIRCH (*Betula*). **European White** (*Betula alba*). A well known tree, with graceful airy foliage, and silvery white bark; very desirable for the lawn, either as a single specimen or in contrast with other trees in a group.

Purple-Leaved (*Folius purpurea*). A very desirable novelty; with the habit of the Birches, it has beautiful purple foliage, as dark as that of the Purple Beech.

Pyramidalis. Silvery white bark, with elegant pyramidal habits, like Lombardy Poplar; not entirely hardy while young.

European White. Cut-Leaved (see Weeping Trees).



WIER'S CUT-LEAVED MAPLE.
(See page 49.)

CATALPA. Bungei. This on its own root is a dwarf Catalpa, a close, compact shrub, absolutely healthy, hardy; its branches are numerous and short, the broad leaves lay as shingles on a roof, making a dense shade, and when worked eight or more feet high, makes the umbrella-shaped top tree, equal if not even more symmetrical than the famous Umbrella China tree of the South; being thus worked it has grown five and one-half feet in diameter in two years.

Speciosa. A variety originating at the West, more upright and symmetrical in its growth than the common Catalpa, and blossoms two or three weeks earlier. Very valuable for timber, fence posts, railroad ties, etc., possessing wonderful durability; a very ornamental and valuable tree.

Syringafolia. A native of the South; a rapid growing beautiful tree, with large heart-shaped leaves and pyramidal clusters of white and purple flowers a foot long. Late in June.

Teas' Japanese Hybrid. A cross between Speciosa and Kaempferii; it has large luxuriant foliage, and large handsome white flowers with purple dots and a touch of yellow around the throat, which have a pleasant delicate fragrance; when in bloom presents a magnificent appearance. In rapidity of growth it rivals the most luxuriant trees; perfectly hardy.

CHESTNUT. American (*Castanea Americana*). A well known forest and nut-bearing tree, of great value for ornamental purposes. This tree is now receiving great attention, and being widely and extensively planted for profit as well as ornament.

CYPRESS. Deciduous or Southern Cypress. A beautiful, stately tree; with small, elegant, ewe-like foliage; very hardy and ornamental.

CHERRY. Flore Alba Pleno (Large Double Flowering Cherry). At the period of flowering a remarkably beautiful and attractive tree; the flowers are so numerous as to conceal the branches and to present to the eye nothing but a mass of bloom, each flower resembling a miniature white rose; a valuable variety deserving wide dissemination. May.

DOGWOOD. Cornus Florida. An American species of fine form, growing from 16 to 25 feet high; the flowers are produced in the spring before the leaves appear, are from three to three and a half inches in diameter, white and very showy, resembling the Clematis flower somewhat; the foliage in autumn is of a deep red color, rendering the tree one of the most beautiful objects at that season.

Red Flowering (C. F. Ruba). Tree in habit of growth not unlike the grand white flowering variety; flowers are a rich rosy red and several inches across, while the foliage assumes a crimson color at an earlier stage; the finest of our native flowering trees.

ELM (*Ulmas*). **American White** (*Americana*). The noble drooping, spreading tree of our own woods; one of the grandest of park or street trees.

Campestris (English). More upright and compact habit than American; also the leaves are smaller and more numerous.

Purple. A beautiful variety, leaves of rich purple color when young.

Scotch or Wych (Montana). A fine spreading tree of rapid growth; foliage large.

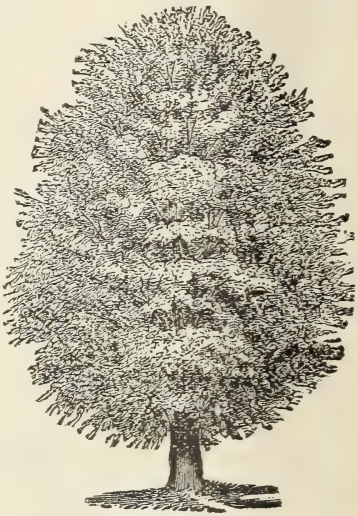
Subrosa (Cork-barked). Bark becomes covered with a fine dense cork with deep fissures.

HORSE CHESTNUT (*Æsculus*). **Alba Plena** (Double White). A superb variety with large spikes of handsome double flowers.

Common or White Flowering (*Hippocastanum*). A very beautiful well known tree, with round dense head, dark green foliage, and an abundance of showy flowers in early spring. As a single lawn tree or for street it has no superior.

Glabra (Buckeye). Similar to the common with small fruit and yellowish flowers.

Red Flowering (*Rubicunda*). Not so rapid a grower as the White, foliage of a dark green and blooms earlier. A very showy tree.



NORWAY MAPLE.
(See page 50).

HORNBEAM. Carpinus. A small sized tree somewhat resembling the Beech; very hardy and quite ornamental; makes an excellent and very ornamental hedge.

JUDAS TREE or RED BUD (*Cercis*). **American** (*Canadensis*). A very ornamental small tree, native of the Western States, which in the early spring, before the leaves appear, is covered with delicate pink flowers. "Nothing can be more beautiful in April or May than a large round headed Red Bud covered with its beautiful flowers, before the bursting of a single leaf."

European Rose Colored (*Silisquastrum roseum*). Similar to the preceding, but with darker foliage and deeper colored flowers.

KENTUCKY COFFEE TREE. A unique and beautiful tree; leaves in tufts, flowers white, borne in loose spikes in early summer, succeeded by brown pods which contain six or seven large gray seeds.

KŒLREUTERIA. Paniculata. From China. A hardy small tree with fine lobed leaves and large panicles of showy golden flowers in the latter end of July; leaves change in autumn to a fine yellow. One of the most desirable trees, particularly valuable for its brilliant golden blossoms, which are produced so late in the season when few if any trees are in bloom.

LARCH. European. A beautiful tree; foliage is of agreeable light green hue, soft and graceful; the branches are drooping and slender, leaves needle shaped, like a fir tree.

LABURNUM. English or Golden Chain. One of the most ornamental of small trees, with smooth shining foliage and bright yellow pea shaped blossoms, produced in beautiful hanging clusters.

LIQUIDAMBAR. Sweet Gum. One of the finest American trees; of medium size and moderate growth, form round headed or tapering, leaves resemble somewhat those of the Maple, but are star-shaped and of a beautiful light green color in summer, turning to deep purplish crimson in autumn; bark corky; beautiful in all stages of growth, it is particularly handsome and striking in autumn.

LOCUST (*Robinia*). **Black, or Yellow Locust.** A native tree of large size, rapid growth, and valuable for shade as well as quite ornamental. The flowers are disposed in long pendulous racemes, white or yellowish; very fragrant and appear in June.

Honey Locust. Three-Thorned Acacia (*Gleditschai Triacanthus*). A rapid growing tree; delicate foliage, of a beautiful, fresh, lively green, and strong thorns; makes an exceedingly handsome, impenetrable and valuable hedge.

Rose, or Moss Locust. A native species of spreading irregular growth, with long, elegant clusters of rose colored flowers in June and at intervals all the season.

LINDEN. American Basswood (*Tilia Americana*). A fine native tree, with large leaves and fragrant flowers.

European (*Tilia Europea*). This variety generally grows regular and conical, and when planted by itself it develops finely; in such a situation with its branches sweeping the ground, it becomes one of the most beautiful objects which a single tree is capable of forming.

White or Silver-Leaved (*Argentea*). A handsome, vigorous growing tree; large leaves, whitish on the under side, and having a beautiful appearance when ruffled by the wind; one of the best.

Rubra (Red-twigged European Linden). A fine variety with blood-red branches.

MAGNOLIA. Acuminata (Cucumber Tree). One of the largest growing of the species; it forms a fine pyramidal-shaped tree; the flowers are yellowish white, medium sized, appearing in June. The fruit when green resembles a small cucumber; but when ripe it is a deep scarlet.

Conspicua (Chinese White Magnolia). A high prized species on account of its large white flowers, which come before the leaves in spring.

Glauca (Sweet White Magnolia). Everywhere esteemed for the delicious fragrance of its white flowers, which are produced through May and June.



SILVER-LEAF MAPLE.
See page 50.)

Purpurea (Purple Magnolia). A large, shrub-like species, producing light purple blossoms very early in spring.

Tripetala (Umbrella Tree). One of the most esteemed and useful trees; it forms a small sized tree; has large, fresh, green looking foliage, large, white flowers, and brilliant scarlet fruit in August.

MAPLE (*Acer.*) **Ash Leaved** (*Negundo*). Box-Elder. A fine, rapid growing variety, with handsome, light green permeated foliage and spreading head; very hardy, excellent for avenues.

Wier's Cut-Leaved (*Laciniata*). A Silver Maple with remarkable and beautiful dissected foliage. Of rapid growth; shoots slender and drooping, giving it a very graceful appearance; should be in every collection. (See illustration page 47).

Sycamore (*Pseudo Platanus*). A large, noble variety, with spacious head and deep green foliage; a free grower and very desirable as a shade tree.

Norway (*Platanoides*). A foreign variety, with large broad leaves of a deep rich green; probably the best Maple in cultivation. (See illustration page 48).

Purple-Leaved (*Purpurea*). One of the most beautiful and distinctly marked of all; leaves purple red, particularly on the under side; a rapid, strong grower; hardy.

Schwedleril (*Schwedleri Maple*). A beautiful variety, with young shoots and leaves of a brigh. purplish and crimson color, which changes to purplish green in the older leaves.

Scarlet (*Rubrum*). A rapid growing tree with red flowers very early in the spring.

Silver-Leaved (*A. dasycarpum*). Of rapid growth; of great value where a rapid growing tree is desired; very hardy and easily transplanted; a favorite street or park tree. (See illustration page 49).

Sugar or Rock (*Saccharinum*). A very popular American tree, and for its stately form and fine foliage, justly ranked among the very best, both for lawn and avenue.

MOUNTAIN ASH. European. (*Sorbus aucuparia*). A very beautiful tree of medium size, with an erect stem, smooth bark and round head; covered during the fall and winter with bright scarlet berries; universally admired.

American. A tree of rapid, but coarser growth than the European variety, pinnate foliage.

Oak-Leaved (*S. quercifolia*). A handsome tree of erect habit and rich green foliage, deeply lobed; very hardy and desirable.

MULBERRY. White (*Morus alba*). A small sized tree of slender but very rapid growth; produces fruit of pinkish white color.



EUROPEAN MOUNTAIN ASH.

Russian. Similar to the white; very hardy.

Tea's Weeping Russian. (See Weeping Trees).

OLIVE. Russian. An ornamental tree of special value; attains a height of thirty feet or more; bark and leaves light green when young, bark becoming darker as the tree grows older, and the leaves more silvery white; blooms profusely in June in small racemes three inches long and their fragrance decidedly sweet and spicy; an excellent lawn tree.

PEACH. Double Red Flowering, Double White Flowering, Double Camelia Flowering, } Beautiful flowering varieties.

Blood Leaved. A variety with foliage as dark as the Purple-leaved Beech—a very curious tree.

***PLUM. Purple-Leaved** (*Prunus Pissardii*). Very remarkable and beautiful, with black bark and dark purple leaves; remaining *very constant* until late in the fall; the new growth is especially bright; the fruit is also red and said to be very good; a great acquisition.

PERSIMMON TREE (*Diospyros Virginica*). A small native tree with pleasing, shining foliage, and well known fruit.

POPLAR. Silver-Leaved Abele (*Poyulus alba*). A tree of remarkably rapid growth; at a distance the white under surface of the leaves, turned up to the wind, gives it somewhat the aspect of a tree covered with white blossoms.

Balsam (*P. balsamifera*). Balm of Gilead. Of very rapid growth; large glossy leaves.

Carolina Poplar. Of good form and robust growth, and desirable where a very large tree is required.

Lombardy (*P. Fastigata or dilatafa*). Well known for its erect, rapid growth and commanding form; very desirable in large grounds or along roads; indispensable in landscape gardening to break the ordinary and monotonous outlines of most other trees; if cut back to within eight or ten feet of the ground when three or four inches or more in diameter, it makes a beautiful round-headed, symmetrical tree.

SALISBURIA (Maiden Hair Tree or Gingko). **Adiantifolia.** A singular and beautiful tree; foliage yellowish green, curiously lobed and marked with delicate hair-like lines.

SYCAMORE. American Plane or Buttonwood. A well known tree and one that is well adapted for streets in cities where the gas and smoke are injurious to foliage.

THORN (*Cratægus*). **Double White** (*Oxyacantha Plena*). Has small, double white flowers; a highly ornamental variety.

Double Scarlet (*Coccinea fl pl*). A fine variety; flowers deep crimson with scarlet shade; very double and considered larger than the double red; fine, rich foliage.

Paul's New Double. This is a new sort and the best; flowers in clusters like verbenas; are very double, large and full, and of a deep rich crimson.

TULIP TREE. Liriodendron Tulipifera. A native tree of the Magnolia order; remarkable for its symmetry, its rich glossy foliage, regularly distributed branches and large, tulip-like flowers; difficult to transplant unless of small size.

WILLOW. Rosemary Leaved (*Salix rosmarinifolia*). Leaves long, silvery white; branches stiff, covered with a whitish down; the general appearance is very effective and pretty.

Laurel Leaved (*Laurifolia*). Beautiful, large glossy foliage; very ornamental.

Royal Willow. An elegant tree with rich silvery foliage; very effective in groups.

YELLOW WOOD. Virgilia (*Lutea*). The most beautiful of all the leguminous or pea-blossom trees; very desirable for a single lawn tree; produces panicles fifteen inches or more in length, of delicately fragrant, creamy-white flowers; bark smooth and polished; leaves remarkable for their purity of color.

WEEPING DECIDUOUS TREES.

ASH (*Fraxinus*). **European Weeping** (*Excelsior Pendula*). The common, well known sort; one of the finest lawn and arbor trees, covering a great space and growing rapidly.

BEECH. Weeping Pendula. Originated in Belgium. Remarkably vigorous, picturesque tree, of large size; its mode of growth is extremely curious; the trunk or stem is generally straight, with the branches tortuous and spreading; quite ungainly in appearance, divested of their leaves—but when covered with rich, luxuriant foliage, of wonderful grace and beauty.

BIRCH (*Betula*). **Cut Leaved Weeping** (*Lasciniata Pendula*). An elegant, erect tree, with slender drooping branches and fine cut leaves; a magnificent variety and worthy a place on every lawn.

Elegans Pendula. A new sort from Europe; habit nearly as pendulous as that of the Kilmarnock Willow.

Young's Weeping (*Pendula Youngii*). This variety is of a beautiful, pendulous habit, with long, slender shoots of picturesque and irregular form; the leaves are broad, almost heart-shaped and very pretty; as a small weeping ornamental tree it has no equal; it is a decided acquisition.



WEEPING MOUNTAIN ASH. (See page 53).

DOGWOOD, (Weeping). Cornus var. Pendula. This well known weeper was found wild in Maryland; as with the common one it also has handsome flowers, scarlet fruit and foliage in the fall, together with a pendulous growth, which soon reaches the ground. It differs from almost all other weepers in having an upright central shoot from which pendulous side branches emerge as it grows.

ELM (*Ulmus*). **Pendula** (Camperdown). Its vigorous, irregular branches which have a uniform weeping habit, overlap so regularly that a compact, roof-like head is formed; the finest Weeping Elm.



WHITE LEAVED WEEPING LINDEN.

LINDEN, OR LIME TREE (*Tilia*). **White Leaved Weeping** (*Alba Pendula*). A fine tree, large leaves and drooping branches.

MOUNTAIN ASH (*Pyrus*). **Weeping** (*Aucuparia pendula*). A beautiful tree, with straggling, weeping branches; makes a fine tree for the lawn, suitable for covering arbors. (See page 52).

MULBERRY. Tea's Weeping Russian (*M. Siberica pendula*). A graceful and beautiful, hardy tree, forming a perfect umbrella-shaped head with long, slender, willowy branches, drooping to the ground and gracefully swaying in the wind. Foliage small, lobed and of a delightful, fresh, glossy green. The tree is exceedingly hardy and of rapid growth and abundant foliage; admirably adapted to cemetery planting and susceptible of being trained into almost any shape.



TEA'S WEEPING RUSSIAN MULBERRY.

POPLAR (*Populus*). **Large Leaved Weeping** (*Grandidentata*). A variety having when grafted high, long slender branches like cords, which droop very gracefully; foliage large, dark shining green and deeply serrated.

WILLOW (*Salix*). **Weeping** (*Babylonica*). Our common and well known Weeping Willow.

AMERICAN WEEPING (*Americana pendula*). An American dwarf, slender, branched species, grafted five or six feet high, it makes one of the most ornamental of small weeping trees; more ornamental than the Babylonica.

KILMARNOCK WEEPING (*Caprera pendula*). An exceedingly graceful tree with large glossy leaves; one of the finest of this class of trees, very hardy.

WISCONSIN WEEPING. Of drooping habit, and said to be perfectly hardy in the northwest.

EVERGREEN TREES.

ARBOR VITÆ (*Thuja*). **American or White Cedar** (*Occidentalis*). This is one of the finest medium-sized evergreen trees; one of the best and most available of the evergreens for screens. It is a native of the coldest part of the country, and there are few places where it will not thrive. Used more than any other variety for ornamental hedging. By the proper use of the knife and shears it can be made to grow into almost any desirable form.

Chinese Golden (*Thuja orientalis*). A medium size tree, of great beauty, with erect branches and dense flat foliage.

Compacta (Parson's). Foliage light green; habit dwarfish and quite compact.

Compacta (*Pyramidalis orientalis*). One of the finest of the Arbor Vitæ's. Grows upright, compact, and very symmetrical; very hardy, retaining its beautiful green color all the winter.

Douglas (*Aurea*). New Golden Arbor Vitæ. Golden foliage.

Ericoides. Heath-leaved; of low, dwarfish habit, forming a round, compact head, with delicate sharp-pointed foliage.

Golden (*Aurea*). A beautiful variety of the Chinese, compact and globular in form; color a lively, yellowish green.

Globosa. Globe-headed Arbor Vitæ. Originated at Philadelphia. Forms a dense round shrub; very desirable.

Hovey's Golden (*T. Hoveyi*). A native variety with fine foliage, bright yellow green color; quite hardy, distinct and beautiful. This is a seedling of the American Arbor Vitæ, and inherits its hardy constitution.



AUSTRIAN PINE. (See page 56.)

Pyramidalis. The most beautiful of all Arbor Vitæs, having dark green compact foliage and remarkably erect form; perfectly hardy.

Pyramidalis Orientalis. A strong upright grower with rather coarse foliage.

Rollinson's Golden (*Elegantissima*). A new golden variety, very bright and distinct, bears the hot weather without fading. Not entirely hardy.

Siberian (*T. Siberica*). Grows slower and more compactly than the American, of which it is a variety; foliage thicker, more luxuriant, and keeps its color well in winter; perfectly hardy; one of the most desirable and useful evergreen trees in this climate.

Tom Thumb. A very dwarf variety; resembles T. Ericoides in its foliage.

FIR (*Picea*). **Balsam or American Silver** (*Balsamea*). A very regular symmetrical tree assuming the conical form even when young, leaves dark green above, silvery beneath.

JUNIPER (*Juniperus*). **Virginian** Red Cedar). A well known tree: its form is usually compact and conical; very hardy and ornamental.

Glacious Red Cedar). The compact conical habit of this variety, combined with its silvery foliage, renders it very distinct and desirable.

Hibernica (Irish Juniper). A distinct and beautiful variety of erect, dense, conical outline, resembling a pillar of green; very desirable.

Suecica (Swedish Juniper). A small-sized handsome pyramidal tree with yellowish green foliage; it is quite hardy.

Savin (*Sabina*). A low spreading tree with handsome dark green foliage; very hardy and suitable for rock work.

PINE (*Pinus*). **Austrian or Black** (*Austriaca*). A native of the mountains of Syria; a rapid growing species with long stiff dark green leaves; very hardy. (See illustration page 55).

Scotch (*P. Sylvestris*). A native of the British Islands; very rapid in its growth. "A dark, tall evergreen," with bluish foliage and rugged shoots; hardy, and grows well even on the poorest soils.

White (*Strobus.*) The most ornamental of all our native pines; foliage light, delicate or silvery green; flourishes in the poorest soils.

Excelsa (Lofty Bhotan Pine). A native of the mountains of Northern India; leaves very slender and drooping, resembling those of White Pine, but longer; timber soft, white and compact.

Mugho (Mountain or Dwarf). A very distinct species; leaves short, stiff, a little twisted, and thickly distributed over the branches; does not grow large but spreads over the ground, generally assuming a globular form; very dense.

Massoniana. Resembling the Ponderosa, has proved very hardy and is beautiful.

Rigaensis. A species of the Scotch Pine, but more symmetrical and compact; vigorous and hardy.

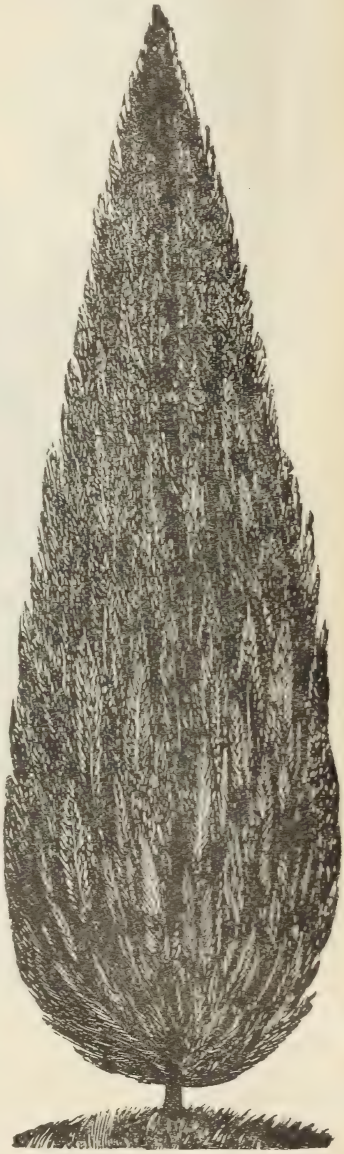
Ponderosa. (Heavy Wooded.) This is also a noble tree, attaining the height of 100 feet; found abundantly on the northwest coast of America and California.

RETINOSPORA (Japanese Cypress). This genus comprises many sorts of wonderful beauty.

Squarrosa. A small-sized tree with graceful drooping branches and glaucous green foliage.

Aurea. Similar in character to the above, with foliage distinctly marked with golden yellow.

Plumosa. A variety with fine short branches and small leaves. The soft, plume-like appearance of the foliage gives it its name.



IRISH JUNIPER.

LAWSON'S CYPRESS. A most desirable tree from California, with elegant drooping branches and feathery foliage of a dark glossy green hue. Not hardy here.

SPRUCE (*Abies*). **Norway Excelsa.** A lofty, elegant tree, of perfect pyramidal habit, remarkably elegant and rich, and as it gets age, has fine, graceful pendulous branches; it is exceedingly picturesque and beautiful; very popular, and deservedly so, and should be largely planted; one of the best evergreens for hedges.



NORWAY SPRUCE.

American White (*Alba*). A tall tree, with compact branches and light green foliage.

Nigra-Black Spruce. A fine native tree, of compact growth, with smooth blackish bark and bluish leaves; very hardy and beautiful.

Douglas Spruce. From Colorado. Large, conical form, branches spreading; horizontal, leaves light green above, glaucous below.

Colorado Blue Spruce (*Picea pungens.*) This species has been tested at various points on the prairies of the West and Northwest with perfect success, enduring a temperature of thirty degrees below zero, in exposed situations, entirely uninjured. This is not only one of the hardiest, but the most beautiful in color and outline; foliage of a rich blue or sage color; it is a valuable acquisition.

HEMLOCK OR WEEPING (*Canadensis*). A remarkably graceful and beautiful native tree, with drooping branches and delicate, dark foliage, like that of the Yew; distinct from all other trees; it is a beautiful lawn tree and makes a highly ornamental hedge.

YEW (English). (*Taxus baccata*). The Yews are remarkable principally for their glossy, dark green foliage; requires a shady and sheltered location; can hardly be grown in the West.

ORNAMENTAL SHRUBS.

AZALIA. Mollis. A beautiful species recently brought from Japan; it has fine large trusses of flowers in shades of pink and yellow; requires some protection.

Nudiflora (Swamp Honeysuckle). A beautiful native species, bearing handsome, showy, pink flowers early in the spring.

ALTHEA OR ROSE OF SHARON. Hibiscus. These are fine shrubs and especially valuable because of their flowering in the fall, when nearly all other shrubs are out of bloom; entirely hardy and easy of cultivation.

Double Lilac (*Pæoniflora*). Very handsome and double lilac flowering.

Double Purple (*Purpurea*). Double, reddish purple; fine.

Double Red (*Ruba Plena*). Double red flowers.

Totus Albus. Double white, with pink center.

Variegated Leaved Double Purple. A very showy kind, distinct, leaves variegated with light yellow, flowers double purple; exceptionally fine.

ALMOND. Amygdalus. Dwarf Double Rose-flowering. A beautiful shrub, with small, double, rosy blossoms closely set upon the twigs before the leaves appear.

Dwarf Double White Flowering (*Pumila Alba*).

ANEMONE JAPONICA (*Alba*). A very desirable, thoroughly hardy, pure white lawn or garden plant; grows about 18 inches high; flowers two inches in diameter; blooms in the fall; very beautiful for cemetery plots.

BUCKTHORN (*Rhamnus*). **Purging** (*Catharticus*). A valuable, hardy, robust shrub, with dark, rich foliage and white flowers, followed by black berries; used extensively for hedges, and being very hardy, is one of the most desirable plants for this purpose.

BERBERRY. Common (*Vulgaris*). A nice shrub, with yellow flowers in drooping racemes in May June, and followed with orange scarlet fruit.

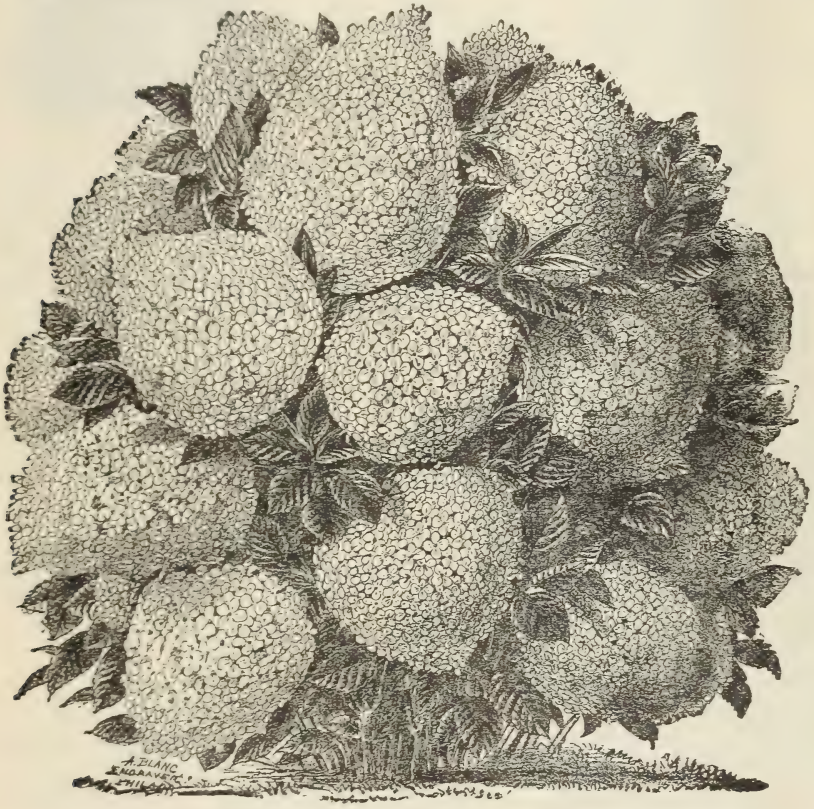
BERBERRY (*Berberis*). **Purple Leaved** (*Purpurea*). An interesting and beautiful variety with violet purple leaves and fruit.

CALYCANTHUS. Sweet Scented Shrub or Allspice (*Floridus*). Sweet scented shrub. An interesting shrub having a rare and peculiar fragrance of wood and flowers its blooms are abundant and of a peculiar chocolate color.

CURRANT (*Ribes*). **Crimson Flowering** (*Sanguineum*). Small deep flowers blooming abundantly and early in spring.

Double Crimson Flowering (*Flore Plena*). A variety of the Crimson with double flowers in July, a most beautiful flowering shrub.

Gordonianum (Gordon's Currant). A hardy and profuse blooming shrub; flowers crimson and yellow in pendent bunches in May.



HYDRANGEA-PANICULATA GRANDIFLORA. (See page 59).

DAPHNE (*Mecereum Pink*). Flowers appear very early, before the leaves, and are very beautiful.

DEUTZIA Slender Branched (*Gracilis*). A charming species, introduced from Japan by Dr. Siebold; flowers pure white; fine for pot culture, as it flowers freely at a low temperature in the winter.

Crenata Flora Plena. Flowers double; white, tinged with rose; one of the most desirable flowering shrubs in cultivation.

Candidissima. Double white flowering; one of the finest shrubs, producing snow-white flowers of great beauty, and valuable for bouquets and baskets.

Pride of Rochester. A new variety raised from *Deutzia crenata flora plena*, and producing large, double, white flowers; the back of the petals being slightly tinged with rose; it excels all of the older sorts in size of flower, length of panicle, profuseness of bloom and vigorous habit; regarded as a charming acquisition.

DOGWOOD. Cornus (*Mascula Variegata*). Leaves striped with pale yellow or white; very beautiful.

Cornelian Cherry (*Mascula*). Bright yellow flowers in May.

Red Branched (*Sanguinea*). Very conspicuous and ornamental in winter on account of its blood-red bark.

EUONYMUS. Barning Bush (Strawberry Tree). A very ornamental and showy shrub, the chief beauty consists in its brilliant dark red berries, which hang in clusters from the branches until mid-winter; planted with a background of evergreens, the effect of contrast is very fine; leaves scarlet in autumn.

Europæus (*European Euonymus*). Forms a tree sometimes 30 feet in heighth; fruit rose colored.

ELÆAGNUS. Argentea. (Silver-Leaved Oleaster). A native species of erect growth and beautiful silvery foliage; flowers small, yellow; July and August.

ELDER (*Sambucus*). **Aurea.** A handsome variety with golden yellow foliage and clusters of pure white flowers; very desirable for ornamenting lawns.

Cut-Leaved (*Lasciniata*). A fine variety of vigorous growth and deeply lasciniated foliage.

Variegated-Leaved (*Variegata*). A hardy, variegated shrub; very showy and fine.

FILBERT. Purple Leaved (*Corylus*). A vigorous shrub with large, deep purple leaves; very ornamental; produces good fruit.

FORSYTHIA. Viridissima. (Golden Bell). Leaves dark green; flowers bright yellow, very early in spring; a fine, hardy shrub; introduced by Mr. Fortune from China.

HALESIA. (Silver Bell). Produces in the spring very pretty white, bell-shaped and drooping flowers, somewhat resembling those of the Fuchsia.

HONEYSUCKLE. Upright (*Lonicera*). **Red Tartarian.** A well known shrub; flowers bright pink, which appear in May.

White Tartarian. Like the preceding, but has dull, white flowers.

HYDRANGEA (*paniculata grandiflora*) A fine shrub of recent introduction, blooming from July to November, large, showy panicles of white flowers in the greatest profusion; it is quite hardy, and altogether a most admirable shrub for planting singly on the lawn or in the margin of masses; to produce largest flowers it should be pruned severely in the spring and the ground enriched (See page 58).

Otaksa (*Japonica var. Otaksa*). This is another new variety; foliage a beautiful dark green; flowers rose colored, borne in immense panicles and in great profusion; requires some protection in winter.

JASMINUM (Jessamine). **Nudiflorum.** A shrub with long slender branches and small deep green leaves; has a profusion of richly scented yellow flowers through spring and summer.

KERRIA (*Corchorus*). **Japonica.** A slender green branched shrub five to six feet high, with globular yellow flowers from July to October.

LILAC (*Syringa*). **Persica** (Persian Lilac). Native of Persia; from four to six feet high, with small foliage and bright purple flowers.

Common Purple (*Vulgaris Purpurea*). Bluish purple flowers.

Double Lilac (*Lemoinei Flore Pleno*). A new and choice variety of the Lilac, producing long racemes of double purple flowers, lasting longer than the single sort. A valuable acquisition.

Large Flowering White (*Alba Grandiflora*). A beautiful variety; has very large, pure white panicles of flowers; considered the best.

White Persian (*Persica Alba*). A fine sort; white flowers delicately tinged with rose color.

PLUM (*Prunus*). **Flowering** (*Trilobata*). Flowers semi-double, of a delicate pink, closely set along the slender branches, and appearing early in spring. A very desirable addition to early shrubs, and becoming very popular.

PURPLE FRINGE (Smoke Tree). (*Rhus Continus*). A very much admired and conspicuous shrub or small tree, with spreading habit, so as to require considerable space; covered in midsummer with a profusion of dusky fringe-like flowers; desirable for its striking peculiarity of flowering.

PRIVET (Common. *Ligustrum vulgare*). Has delicate foliage, pretty white flowers, and bunches of black berries; in warmer climates it is an evergreen; the leaves hang on very late. A valuable hedge plant.

California (*Ovalifolium*). A desirable shrub, nearly evergreen, that produces delicate white flowers in great profusion; the flowers possess a pleasant heliotrope fragrance.

QUINCE Japan. (*Cydonia Japonica*). **Scarlet.** An old and esteemed variety, having a profusion of bright scarlet flowers in early spring, and one of the best early shrubs; makes a beautiful and useful hedge.

Blush Japan (*Alba*). A beautiful variety of the preceding with delicate white and blush flowers.

Grandiflora. Flowers nearly white, very showy; fruit extremely large, almost pear-shaped.

SNOWBERRY (*Symphoricarpus*). A very pretty shrub, with clusters of rose colored flowers early in spring, followed by waxy white berries, which hang on through part of the winter.

SPIRÆA Meadow Sweet. The Spiræas are all elegant low shrubs of the easiest culture, and their blooming extends over a period of five months.

Ariæfolia (White-beam Tree-leaved Spiræa). An elegant species from northwest America; habit dense and bushy; plant entirely covered with greenish white blossoms in June.

Billardi Billard's Spiræa. Rose colored blooms nearly all summer.

Crenata (Hawthorn-leaved Spiræa). Dwarf habit; flowers dull white. Free bloomer in May.

Callosa (Fortune's Spiræa). Has large panicles of deep rosy blossoms; grows freely and blossoms nearly all summer. Fine.

Collosa Alba Fortune's Dwarf White Spiræa. A white flowering variety of dwarf habit; very fine; keeps in flower all summer.

Obovata Obovate-leaved Spiræa. Small and glossy toothed leaves and small spikes of white flowers. July and Aug.

Plum-Leaved (*Prunifolia*). A very beautiful variety; flowers white and very double, like English daisies; very profuse, blooms in April; foliage turns a beautiful bronze color in autumn.

Reevesii or Lanceolata Lance-leaved Spiræa. A charming shrub with narrow pointed leaves and large round clusters of white flowers that cover the whole plant; blooms in May.



SPIRÆA VAN HOUTTI.

Flore Pleno Lance-leaved Double Spiræa. A beautiful double flowering variety.

Thunbergii Thunberg's Spiræa. A very pretty white flowering variety with narrow linear leaves; valuable for forcing; one of the first to flower.

Van Houtti. One of the most charming and beautiful of the Spiræas, having pure white flowers in clusters or panicles an inch in diameter. Astonishingly profuse in bloom, and plants remarkably vigorous and hardy. But recently introduced from France, and there is no more desirable flowering shrub in cultivation.

Golden-Leaved (*Opulifolia Aurea*). An interesting variety with golden yellow tinted foliage and double white flowers in June; very conspicuous.

SYRINGA (*Philadelphus*). All the species and varieties of the Syringa have white flowers, many of them quite fragrant.

Large Flowered (*Grandiflora*). A conspicuous, showy kind with large flowers and irregular branches.

Coronarius Garland Syringa. A well known shrub, with pure white, sweet scented flowers; one of the first to flower.

Flore Pleno (Double-Flowering Syringa. A variety with partially double, very fragrant flowers; does not bloom much.

Foliis Aureis (Golden-Leaved Syringa). A very pretty dwarf plant, with golden yellow foliage. It keeps its color the entire season, and will be found valuable for creating pleasing and striking contrasts with purple leaved shrubs.

TAMARIX. African (*Africana*). This is a very beautiful shrub, with small leaves, somewhat like the Juniper, and delicate, small pink flowers in spikes in May.

VIBURNUM. Snow Ball (*Sterilis*). A well known favorite shrub, of large size, with globular clusters of white flowers in June.

Plicatum (*Plicate Tiburnum*). A rare and exceedingly beautiful species from Japan. Flowers pure white, in very large globular heads.

WIEGELA. Desboisi. A beautiful variety, with deep rose-colored flowers, resembling rosea, but flowers much darker; one of the darkest and best.

Hortensis Nivea. Flowers pure white, retaining their purity during the whole time of flowering; foliage large; habit vigorous; a very profuse bloomer.



SNOW BALL.

Van Houtti. A new variety of vigorous growth, with dark, rich crimson flowers, produced in great abundance; darker than Desboisi, and a decided acquisition.

Variegated Leaved (*Fol. Variegata*). Leaves bordered with yellowish white, finely marked; flowers bright pink.

Candida. The best white variety. A large sized shrub of erect, vigorous growth, producing a great profusion of pure white flowers in June and July; especially valuable, being clear white and a much better grower than Hortensis Nives; a valuable feature of the variety is its continuing to bloom moderately throughout the summer.

WHITE FRINGE (*Chionanthus*). **Virginian** (*Virginica*). One of the best large shrubs or small trees with superb foliage, and delicate, fringe-like white flowers.

EVERGREEN SHRUBS.

The best of success has not attended the cultivation and growing of the Evergreen Shrubs on the southwestern prairies. They require a cool, shady location, and by proper attention can be made to succeed moderately well.

ASHBERRY. Mahonia (Holly Leaved) (*Aquifolia*). A most beautiful shrub, with glossy, holly-like leaves, which change to brownish green in winter, with clusters of bright yellow flowers in May; makes a good hedge.

BOX (*Buxus*). **Dwarf** (*Suffruticosa*). Used principally for borders and edging, for which purpose it is the best plant in cultivation.

Sempervirens Tree Box (*Arborescens*). A very desirable small tree in the yard or garden, well adapted to small places; prefers a shady situation; it can be made to assume any form.

HOLLY (*Ilex*). **Green-Leaved,** Deep green, glossy shining leaves, with bright red berries through the winter; largely used in Christmas decorations.

Rhododendron. These are the most magnificent of all Evergreen Shrubs, with rich, green foliage and superb clusters of showy flowers; they flourish best in a peaty soil, and like Azalias, are the most effective when grouped. Plant in sheltered locations. Soil strongly impregnated with lime should be removed before planting and the space filled in with leaf mould and peat or muck mixed, or other good soil tolerably free from lime. The Catawbiense varieties have lilac-colored and red flowers, and are perhaps the most hardy sorts.

HEDGES.

The idea of planting hedges for use and ornament, and screens for the protection of orchards, farms and gardens, is a practical one, and rapidly becoming appreciated.

They serve not only as protection against the fierce winds, but there is much less trouble from the blowing off of the fruit. Some writers tell us that the temperature is warmer in the vicinity of evergreens. However this may be, we know that our gardens are earlier and our fruits ripen better when protected by such screens. Nothing can be more beautiful than ornamental Hedges of Evergreens, or shrubs, well kept and pruned to serve as boundary lines between neighbors, or as divisions between the lawn and garden, or to hide unsightly places. By using medium sized plants a hedge can be made as cheeply as a good board fence can be built, and then with a little care, it is becoming every year more and more "a thing of beauty." We all know that such hedges continue a principal attraction in our best kept places.

To secure a good hedge it is necessary to plant well. Dig a deep, wide trench, and work the soil thoroughly about the roots. Press the ground firmly, and mulch heavily for a distance of two or more feet on either side, according to the size of the plants. This is especially necessary with evergreens, and all exposure of the roots to the sun and air must be strictly avoided.

Evergreens should be pruned in the spring just before they commence growing. Summer pruning or shearing may be practiced on the Arbor Vitæs, Cedars, etc.

EVERGREENS FOR HEDGES AND SCREENS.

Arbor Vitæ (American). This plant is one of the finest of all Evergreens for screens. It is very hardy and easily transplanted. It grows rapidly and with little care, or rather by easy management. It soon forms a most beautiful hedge, dense and perfectly impervious to the sight. Even in three or four years very handsome and close hedges can be produced.

Siberian. This variety is admirably adapted for hedges. It is richer in color and more compact in growth than the American; very hardy.

Hovey's. This is a very bright color; almost golden; very hardy and beautiful.

Tom Thumb (Dwarf). Makes exceedingly pretty borders where it succeeds.

Box (Dwarf). This plant is used extensively to form edgings for borders where it succeeds.

Hemlock. Extremely fine and rich colored when once started.

Norway Spruce. Forms a beautiful and desirable screen or shelter, where a rapid and high growth is required, as for sheltering from cold winds, planting on the borders of grounds and plantations of fruit trees, etc. With careful pruning it can be kept low and in good shape and thus makes a highly ornamental hedge.

For shelters and screens in orchards and other places, we recommend the Norway Spruce, Scotch, Austrian and White Pines.

DECIDUOUS HEDGE.

Honey Locust. Very hardy and desirable for the North.

Osage Orange. Highly esteemed at the West and South; not hardy enough for the Northern States.

Japan Quince. Unquestionably a fine plant for an ornamental hedge. Grows very compactly, will submit to any amount of pruning, while the brilliant and showy scarlet flowers make it exceedingly attractive.

Privet. Plant four inches apart and keep cut back well after the first year; when trained well is one of the most ornamental hedges for lawns and cemeteries.

The following are also very desirable for ornamental hedging, descriptions of which will be found under the proper headings in this catalogue.

Purple Berberry, Roses, Altheas, Spiræas, Tartarian Honeysuckle.

HARDY CLIMBING AND TRAILING SHRUBS.

AMPELOPSIS (*Veitchii*). **Japan Creeper** (Boston Ivy). Foliage smaller than those of the American and more dense, forming a sheet of green. The plant is a little tender while young and should be protected the first winter. When once established it grows rapidly and clings to a wall or fence with the tenacity of ivy. The foliage while handsome in summer changes to a crimson scarlet in autumn and is very beautiful for covering walls, stumps of trees, rockeries, etc., and for ornamentation of brick and stone structures it has no equal.

Quinquefolia (Virginia Creeper). A native vine of rapid growth, with large, luxuriant foliage, which in the autumn assumes the most gorgeous and magnificent coloring. The blossoms, which are inconspicuous, are succeeded by handsome dark blue berries. The vine is best calculated to take the place in this country of the celebrated English Ivy, and is really in summer not inferior to it.

ARISTOLOCHIA (Birthwort). **Sipho** (Duchman's Pipe). A twining vine of rapid growth, having large, dark green leaves, and curious brownish, pipe-shaped bloom.

AKEBIA. Quinata. A very beautiful, perfectly hardy, fast growing Japan vine, with magnificent foliage; producing flowers in large clusters of chocolate purple color, possessing a most delicious perfume; unsurpassed for covering trellises and verandas, the foliage never being attacked by insects.

BIGNONIA, OR TRUMPET FLOWER. Scarlet (*Radicans*). A splendid climber, vigorous and hardy, with clusters of large trumpet-shaped, scarlet flowers in August.

Large Flowering (*Grandiflora*). A magnificent vine with large flowers, but not so hardy.

BITTERSWEET. Staff Tree (*Celastrus scandens*). A well known native climber of extraordinary and powerful growth; foliage bright and shining; its orange-colored seed vessels, displaying their crimson seeds, are quite ornamental in winter; one of the finest and most luxuriant climbers; should be largely planted.

CLEMATIS, OR VIRGIN'S BOWER. The different varieties and species of Clematis now in cultivation are of the highest beauty and utility. They vary greatly in their foliage and flowers, and are adapted to various uses; some of them, such as our common native sort, (*C. Virginiana*), and the European Virgin's Bower, (*C. flammula*), are quite fragrant, and are particularly attractive on this account. The large-flowered varieties, like the well known (*C. Jackmanni*), are extremely showy. These plants when trained on trellises, and over porches, pillars and rockwork, produce great masses of bloom, which make a grand appearance, especially when contrasting colors are in proximity. Good rich, deep, sandy loam, mulched in winter with well rotted manure, where it has partial shade and a liberal supply of water at the roots will produce the best results both in vigor of plant and richest sheets of bloom.

American (*Virginiana*). One of the most rapid-growing kinds, covered in August with the greatest profusion of pale white, fragrant flowers, which are succeeded by brown, hairy-like plumes; very beautiful and unique.

Coccinea. Distinct from other varieties; bright coral scarlet flowers; July to October.

European Sweet (*C. flammula*). The flowers of this variety are very fragrant; requires a slight protection in winter; very desirable.

Viticella. An old European sort, with small blue flowers on long stems; very hardy and vigorous.

Vitalba. An old European variety, with small, fragrant, greenish-white flowers; of rapid growth.

CLEMATIS, LARGE FLOWERING. Alexandria. This is one of the continuous blooming sorts of real merit; has a vigorous habit of growth, and in flower is remarkably showy and ornamental. The flowers are large and of a pale reddish violet color; July to October.

Duchess of Edinburgh. This is without doubt the best of the pure whites; deliciously scented.

Fairy Queen. Pale flesh color with light pink bar; very attractive.

Fair Rosamond. Blush white, with reddish bar; flowers fragrant.

Henryi. Fine, large, pure white; one of the best long bloomers.

Jackman's (*Jackmanni*). A very profuse blooming variety, with flowers from four to six inches in diameter, of an intense violet, purple color, borne successionally in continuous masses on the summer shoots.

Jackmanni (*Alba*). A fine variety of the preceding, with pure white flowers.

Prince of Wales. Deep purple flower resembling Jackmanni.

Star of India. A very showy, very free flowering sort, with large flowers, first of a reddish plum color, changing to a violet purple, with turky red bars in the center of each flower leaf; a distinct variety of great merit; July to October.

HONEYSUCKLE (*Lonicera*). **Belgica** (Monthly Fragrant or Dutch). Blooms all summer, very sweet, red and yellow flowers.

Common Woodbine (*Periclymena*). A strong rapid grower, flowers very showy, red outside buff within; June and July.

Chinese Twining Japonica. Holds its foliage nearly all winter, blooms in July and September and is very sweet.

Canadensis (Canadian Honeysuckle). A very robust, rapid grower, with large glaucous leaves and yellow flowers.

Halliana (Hall's New). Nearly evergreen; flowers pure white changing to yellow, producing abundantly; fragrant like a Jassemine; the best bloomer of all.

Yellow Trumpet (*Aurea*). A well known variety with yellow trumpet flowers.

Scarlet Trumpet (*Sempervirens*). This and its varieties are the handsomest in cultivation; it is a strong, rapid grower, and produces scarlet inodorous flowers all summer.

IVY. The Evergreen Ivies often suffer in winter, if exposed to the sun, and should therefore be planted on the north side of a wall or building.

Hedera (English). A well known old and popular sort.

New Silver-Striped. Deep green leaves, heavily margined with white; very striking.

Variegated-Leaved (*Fol. Variegata*). With smaller leaves than the preceding.

SILK VINE. Periploca (*Græca*). A graceful rapid growing vine with dark glossy foliage and velvety brown flowers; will twine thirty or forty feet high.

WISTARIA. Chinese (*Sinensis*). A most beautiful climber of rapid growth, and producing long pendulous clusters of pale blue flowers, when well established makes an enormous growth, is very hardy, and is one of the most superb vines ever introduced.

Double Purple (*Flore Pleno*). A rare and charming variety, with perfect double flowers, deeper in color than the single, and the racemes of remarkable length. The plant is perfectly hardy, resembling the Wistaria Sinensis, so well known as one of our best climbing plants.

Chinese White. Introduced by Mr. Fortune from China, and regarded as one of his greatest acquisitions.

American White. A native seedling, pure white; bunches short; a free bloomer.

LISTS OF TREES AND SHRUBS FOR SPECIAL PURPOSES.

For the benefit of patrons who have not had opportunity of observing the general growth and appearance of various kinds of trees, evergreens, and shrubs, we give the following lists, by which they will be better enabled to make selections, descriptions of which can be seen in their proper places in this catalogue.

TREES ADAPTED TO STREETS, AVENUES, PARKS, AND LARGE GROUNDS.

White Elm	Sugar or Hard Maple	Carolina Poplar
Flowering Horse Chestnut	Silver or Soft Maple	White Ash
American Linden	Catalpa	Excelsior Ash
European Linden	Lombardy Poplar	Box Elder
Norway Maple	Tulip Tree	

TREES, EVERGREENS, AND SHRUBS, FOR PARKS, EXTENSIVE GROUNDS, LAWNS, CITY LOTS, ETC.

Cut-Leaved Alder	Laburnum	Mulberry, all varieties
Cut-Leaved Weeping Birch	Liquidambar	Plum, Prunus Pissardii
Catalpa	Lindens, all the varieties	Salisburia
Dogwood	Magnolia	Tulip Tree
Horse Chestnut	Maples, Weir's Cut-Leaved,	Weeping Elm
Judas Tree	Purple-Leaved and Norway	Kilmarnock Weeping Willow
Kaulreuteria	Mountain Ash, all varieties	Wisconsin Weeping Willow

EVERGREENS.

Arbor Vitæs—American, Compacta, Golden, Globosa, Hovey's Golden, Pyramidalis, Siberian, Rollinson's Golden.

Balsam Fir	Junipers—Irish, Swedish, Savin	Red Cedar
Pines—Austrian, Scotch, White, Excelsia, Dwarf, Rigaensis		
Retinospora, the varieties described	Spruce—Excelsior, Colorado, Black	Hemlock

SHRUBS.

Altheas, all the varieties	Filbert—Purple-Leaved	Quince—Japan
Almonds—Dwarf-White, Pink	Halesia	Snowberry
Berberries—Purple, Common	Honeysuckle	Spiræa, all varieties
Calycanthus	Hydrangea—Pan.Grandiflora	Snowball
Deutzias, assorted	Lilac, varieties	Syringas, all varieties
Forsythia	Fringe—Purple, White	Wiegelas, assorted

ROSES.

HYBRID PERPETUAL (HYBRID REMONTANT) ROSES.

This group comprises, for the most part, the roses for the multitude. They are mostly hardy, vigorous, easy of culture.

As a general rule, they thrive best in well prepared loam. Close pruning is generally required, but should be regulated to some extent by the rate of growth of each variety, those of vigorous habit not requiring to be cut back so much as those of slower growth. The flowers range in color from the purest white to the deepest crimson, with the intermediate shades of pink, blush, cherry, carmine and peach. The term perpetual might lead some to think that they are as constant bloomers as the everblooming roses. This is not the case. They flower freely in June and at short intervals during the summer and fall.

Remedy for Mildew. The mildew is perhaps the most injurious disease. It is generally caused by extremes of heat and cold, and by a long continuance of damp, cloudy weather. The best remedies are sulphur and soot; one of these should be applied the moment the disease makes its appearance. It is a good plan to sprinkle the plants with water, so that the substance applied will adhere.

Achille Gonod. Dark crimson red; very large, full and bold flower; one of the best bloomers.

Abel Carriere. Purplish crimson, with fiery center.

Alfred Colomb. Bright carmine red, clear color, large, deeply built form; exceedingly fine; very fragrant; one of the very best.

American Beauty. An Everblooming Hybrid Perpetual. The flowers are very large, of beautiful form and very double; color a deep rich rose. The fragrance is delightful, resembling La France.

Anne de Diesbach. Carmine, beautiful shade; moderately full and very large.

Auguste Mie. Clear rosy pink; very large and finely cupped; vigorous, fine.

Baronne de Maynard. Pure white, medium sized flowers; good form; very double and one of the most persistent of bloomers.

Beauty of Waltham. Almost full; beautiful bright cherry color.

Baronne Provost. Deep rose; very large and full; a vigorous grower and abundant bloomer; one of the oldest and finest of this class.

Bell of Normandy. Silvery rose color; large, full and globular in form; extra fine.

Baroness Rothschild. Light pink, cupped form, very symmetrical, without fragrance; very beautiful; a good grower.

Coroline de Sansal. Clear, delicate flesh color, becoming blush; magnificent variety; the best rose of its color in the catalogue; growth vigorous and foliage luxuriant.

Coquette des Alps. White, lightly shaded with carmine; of medium size; a free bloomer.

Coquette des Blanches. Pure white, flowering in clusters; a very free bloomer.

Climbing Jules Margottin. Carmine-rose, lightened with pink; full flowers of medium size, very pretty in bud. This is a decided acquisition; the flowers are the same as in the old variety, except that they are a little smaller, and quite as freely produced; the growth is more vigorous.

Climbing Victor Verdier. Rosy carmine, purplish edges; showy and very effective.

Dinsmore. A true perpetual, flowering very freely the whole season; flowers large and very double; color deep crimson. The plant is of a dwarf, bushy habit, every shoot producing a bud.

General Washington. Brilliant rosy crimson; large and double; fine.

General Jacqueminot. Brilliant crimson scarlet; very showy and effective.

Giant of Battles. Very brilliant crimson center; dwarf habit, free bloomer, and one of the very best.

Glory Lyonaise. Originated at Lyons, France, and claimed to be a Yellow Hybrid Perpetual. It is described as being clear chrome yellow, with rich, creamy white border; the flowers are large, very dull and delightfully sweet.

Hermosa. An excellent rose; blooms in fine clusters; large, very double and fragrant; color beautiful clear rose, a constant bloomer; hardy; one of the best.

Jules Margottin. Light brilliant crimson; large, full and beautiful.

John Hopper. Deep rose, with crimson center; one of the best.

Louis Van Houtte. Beautiful maroon; medium size, full, of fine shape, deliciously perfumed.

La Reine. Deep rosy lilac, large and full, sweet and double.

Marshal P. Wilder. A fine new rose raised by Ellwanger & Barry; resembles Alfred Colomb in color; said to be more vigorous and hardy.

Madame Laffay. Rosy crimson, large and double; one of the oldest and best.
Madame Chas. Wood. One of the most beautiful Hybrid Perpetual Roses ever introduced. The flower is extra large, full and double; color deep rosy crimson, sometimes brilliant scarlet, with maroon shading; it blooms soon after planting out and continues to bloom all summer.
Madame Victor Verdier. Bright cherry rose; large, compact and finely cupped; blooms in clusters; a free bloomer.
Marie Baumann. Brilliant carmine crimson; large, full and of exquisite color and form; very fragrant.
Paul Neyron. Deep rose color, good foliage, by far the largest variety in cultivation: free bloomer.
Pius the Ninth. A bright purplish red, changing to violet; very large and full; robust and profuse bloomer; one of the best.
Prince Camille de Rohan. Deep velvety crimson, large, moderately full; a splendid rose.
Perle des Blanches. Vigorous, very large and full, well formed; white center, changing to flesh color.
Pierre Notting. Large, very full, globular; dark red or crimson shaded violet; fragrant; vigorous; one of the very best dark roses.
Sir Garnet Wolseley. Vermillion shaded with bright carmine; color well maintained throughout.
Victor Verdier. Clear rose, globular, fine form and free bloomer; superb.
Star of Waltham. Carmine-crimson, medium or large size; semi-globular, full; foliage very large, smooth green wood, with occasional red thorns.
Sydonie. Blush, large and fine, distinct; a vigorous grower.

HYBRID TEA ROSES.

This class is the result of a cross between the varieties of Hybrid Perpetuals and Teas. The great advantage claimed for them is that they combine the free flowering qualities of the Tea class with the rich coloring and to some extent the hardiness of the Hybrid Perpetual. Though not as hardy as the Hybrid Perpetual they are much hardier than the Teas, and will stand out during winter wherever the Bourbon will, and where the Teas would be killed to the ground.
Captain Christy. Delicate flesh color, shaded rose in the center; a large, finely formed flower.
La France. Delicate silvery rose, very large and full; an almost constant bloomer, equal in delicacy to a Tea rose; the most pleasing fragrance of all roses; a moderate grower; semi-hardy.
Puritan. A beautiful pure white variety of the most delicious fragrance. In size and shape of flower it very closely resembles the Hybrid Perpetual class, with the flowering habit of the everblooming section.
Pierre Guillot. Bright dazzling crimson, passing to brilliant carmine, petals beautifully veined with pure white, flowers large, very double and full; a free bloomer and very sweet.
William F. Bennet. Beautiful glowing crimson, similar to Gen. Jacqueminot; very fragrant; a very free bloomer, but only a moderate grower.

MOSS ROSES.

Well-known, extremely hardy. Some of them blossom in the autumn and are so called "Perpetual Moss."
Ætna. Bright crimson, very double; superb; fragrant; very mossy.
Captain John Ingram. Dark velvety purple, full and fine.
Countess of Murinais. White, slightly tinged with flesh; the best white moss.
Glory of Mosses. Pale rose, very large, full and beautiful.
Lanei. Large, bold flowers, very double, full and fragrant; color rich crimson, delicately shaded with rosy purple; very mossy.
Luxembourg. Large, cupped, fine purplish crimson; a luxuriant grower and free bloomer.
Perpetual White. Pure white; blooms in large clusters.
Princess Adelaide. Blush, becoming quite pale; very double and well formed; the most vigorous grower of all the Mosses.
Salet. Clear rose color, very double, of vigorous growth and abundant bloom; perpetual.

CLIMBING ROSES.

These are admirably adapted for covering walls, trellises, old trees, unsightly buildings, etc. Their rapid growth, perfect hardiness, luxuriant foliage, immense clusters of beautiful flowers, commend them at once to everyone.
Baltimore Belle. Pale blush, almost white; double; very beautiful; fragrant.
Climbing Victor Verdier. Bright rose. (See H. P. Roses).

Jules Margottin. (See H. P. Roses).
Gem of the Prairie. A hybrid between Madame Laffay and Queen of the Prairie; bright red blotched with white; quite double, a free bloomer and a good climber.
Greville or Seven Sisters. Purplish crimson and pink; not quite hardy.
Pride of Washington. Brilliant amaranth, shaded rose center; large clusters, very double.
Queen of the Prairie. Bright rose color, large and double, very vigorous and rapid in its growth; the best climbing rose.
Sweet Briar. Rosy pink single flowers, followed in autumn by bright colored seed pods; foliage very fragrant.

SUMMER ROSES.

Harrison's Yellow. Double, bright yellow, very showy and fine.
Madame Hardy. White, large, full and double.
Madame Plantier. One of the finest pure white roses, blooming in clusters.
Persian Yellow. Deep golden yellow, double and very fine.

STANDARD AND HALF STANDARD, OR TREE ROSES.

These are the roses of any of the previous sorts that are budded or grafted on the free or cultivated stock of the Dog or Briar Rose, from eighteen inches to five feet from the ground, and form fine dwarf trees; and when properly cultivated and cared for make a very fine novelty, and should be in every well regulated lawn. Should be removed to the cellar, pit, or greenhouse during the winter.

BOURBON ROSES.

These are not quite so hardy as the Hybrid Rose, requiring protection in the winter; they are continual bloomers, of vigorous rapid growth, with rich luxuriant foliage.

Blanch Lafitte. Pale flesh color, full and beautiful.
Hermosa. Light blush or flesh color; large, full and double; grows freely and blooms profusely.
Louis Odier. Fine bright rose, large full cupped form.
Louis Margottin. Delicate satin rose, fine form, free bloomer, and a superb new rose.
Mrs. Paul. New; large open flower like Camelia, color blush white with rosy peach shading; blooms in autumn.
Queen of the Bourbons. Fawn colored rose, beautiful and profuse bloomer.
Sir J. Paxton. Deep rose shaded with crimson; very strong grower; fine rich foliage and free bloomer.
Souvenir de la Maison. Pale flesh with a fawn shade; very large, full, beautiful.

NOISETTE, OR EVER-BLOOMING CLIMBERS.

These are the finest autumnal bloomers, and are distinguished by flowering in clusters. They are not quite hardy, requiring protection during the winter.

Augusta. Sulphur yellow, large and full, very fragrant, a strong grower, similar to if not identical with Solfaterre.
Caroline Merinesse. Creamy white, small and full, nearly hardy, flowers resemble those of Felicite Perpetual.
Cloth of Gold (*Chromatella*). Rich deep yellow, large, double, fragrant, and a vigorous grower.
Celine Forestier. Fine bright yellow, highly fragrant, a strong grower and profuse bloomer; a fine rose.
Lemarque. White, with sulphur center, flowers in clusters; a magnificent climbing rose under glass.
Lady Emily Peel. Has pure white flowers in large clusters, a free grower and fine for pillars.
Marechal Neil. Beautiful deep yellow, very large; full, globular form; sweet scented, free flowering; one of the finest yellow Tea-scented Roses yet introduced; a good climbing rose.
Madame Alferd de Rougemont (Hybrid Noisette). White, medium size, full.
Martha Washington. Pure white, very double; a vigorous grower and profuse bloomer.

TEA ROSES, EVER BLOOMING.

Tea Roses are celebrated for their delicious fragrance, the exquisite forms and rich charming tints of their flowers. They form the largest and most popular section of the Ever Blooming Roses, producing an endless succession of flowers in a favorable climate, and even at the North blooming from the time they are planted until they are stopped by freezing weather. Teas should be planted in a rich warm soil, where they will be kept constantly growing, for they bloom as they grow.

Bon Silene. Noted for the great size and beauty of its buds; color deep rose. This rose is used largely in floral work, and is highly esteemed for its rich dark color and beauty of form.

Catherine Mermet. Bright flesh color, large, full, and of beautiful form; a fine winter bloomer in conservatories.

Duchesse de Brabant. Few roses equal this in freedom of flowering; none surpass it in either fragrance or vigor; color rose, heavily shaded with amber or salmon.

Duchesse of Edinburgh. A very desirable novelty; flowers of good size, moderately full, deep crimson in the buds, becoming brighter as they expand; good for winter flowering.

Glorie of Dijon. Yellow shaded with salmon and rose; large, full, and distinct.

Madame de Watteville. Also known as Tulip Rose on account of the beautiful feathery shadings of bright rose around the edge of each petal. A strong, vigorous grower, with handsome foliage. Color white, shaded with salmon; very fragrant; flowers large and beautiful shape.

Perle des Jardins. A beautiful straw color, sometimes deep canary; very large, full, and of fine form; stiff shoots or stems, and very free flowering.

Princess Beatrice. A magnificent yellow Tea Rose. The flowers, which are carried on long stiff stems, are of perfect form and a lovely shade of golden yellow, with a slight tint of pure rose.

Sunset. Large size, fine full form, very double, and deliciously perfumed. The color is a remarkable shade of rich golden amber, elegantly tinged and shaded with dark ruddy copper.

Safrano. Bright apricot yellow, changing to orange and fawn, sometimes tinted with rose; valued highly for its beautiful buds; fragrant.

The Bride. This is decidedly the most beautiful white Tea Rose. The flowers are very large and double, on long stiff stems, of fine texture and substance, and last a long time in a fresh state after being cut, making it one of the best varieties for corsage wear or bouquets.

PÆONIAS.

TREE AND HERBACEOUS.

These are all showy, beautiful flowers, perfectly hardy, easy to cultivate; flowering early in the season, before rose. They deserve a place in every garden.

HERBACEOUS CHINESE PÆONIAS. August Van Geert. Deep crimson, slightly tipped blush.

Delicatissima. Double, delicate rose, fragrant and fine.

Officinalis Malabilis. White, carmine center.

Rosea Fragrans. Deep rose, double, large and fragrant.

Striata Rosea. Blush white, large and full; inside petals fringed and clouded with rose.

Victoria Tricolor. Outside petals pale rose, mottled with pink; center canary white; petals edged with red; a superb flower.

TREE PÆONIA (*Arborea*). Very double, deep blush with purple center; showy and fragrant.

CASSIA.

American Senna (*Marilonetica*). A splendid herbaceous plant, three to four feet high; flowers pea shaped, bright yellow in auxiliary clusters; July and August.

YUCCA, SPANISH BAYONET.

These have a grand appearance; the stem is three feet above the ground, covered with large bell-shaped flowers on laterals, forming a perfect pyramid.

Filamentosa (Adam's Needle). Thread leaved, creamy white, three to four feet; July.

MISCELLANEOUS BORDER AND HOUSE PLANTS.

The following are the best varieties of these useful plants, which are exceedingly valuable on account of their hardiness, easy culture and showy appearance. They will mostly live all winter in the open ground, and bloom freely every year. We name some leading sorts.

Bell Flower (*Campanula*). Large showy bell-shaped flowers of pure white, blue, and purple; July and August.

Carnations. White, carmine, rosy pink, and striped; very beautiful and fragrant, continuing in flower a long time. Plant in pots in fall, and grow in conservatory or parlor window. One of the best house plants.

Chrysanthemums. The prettiest of late autumn and early flowering winter plants. In November and December there is nothing that will make such a cheerful display. Plant in pots and place them in the house where they will have the sun. The prevailing colors are white, yellow and red, the red being the least interesting.

Columbine (*Aquilegia*). Well known, flowers hanging from rather small stems, about two feet high; various colors.

Dicentra Spectabilis or Dielytra (Bleeding Heart). A beautiful hardy border plant, with brilliant rosy heart shaped flowers, hanging in great profusion from a gracefully curved stem; May and June.

Hollyhock. There are very few plants so grand and yet so perfect and delicate as the Hollyhock. Its flowers are quite as double and almost as pure and perfect as those of the Camelia. Seeds sown in the spring produce plants that will bloom the second summer. Plants set out in the spring will flower about midsummer, and for several years, if not allowed to bloom too freely the first year.

Perennial Phlox. The flowers of Perennial Phlox are immense masses of bloom, from the purest white to crimson. They grow to a height of two feet or more and are perfectly hardy.

SUMMER AND AUTUMN FLOWERING BULBS,

THAT REQUIRE TAKING UP IN THE FALL, AND TO BE KEPT FROM FREEZING.

Boussingaultia (*Bassilloides*). Maderia Vine. An old well known climber, a rapid grower, with thick fleshy leaves and white flowers; grand for trailing in a porch, over a window, or in any place where you desire a beautiful green.

Dahlias (Double). Well known autumn flowering plants, growing from two to five feet high, and producing a profusion of flowers of the most perfect and beautiful forms, varying in color from the purest white to the darkest maroon.

Gladiolus. Of all our summer flowering bulbs the Gladiolus stands eminently at the head as the most varied and beautiful class. The flowers are produced in spikes two feet in height and upwards; the brilliant scarlet and crimson of some, form a striking contrast with the delicate shades and pencilings of the lighter colored varieties. By planting at intervals from May first to middle of June a succession of flowers can be had from July to October.

Tuberose (Double and Single). Flowers very fragrant; flower stems from three to four feet; autumn.

PEARL.—Its value over the common variety consists in its flowers being nearly double in size; imbricated like a rose, and in its dwarf habit growing only eighteen inches to two feet. The fragrance and color same as common sort.

Tigridas (Shell Flower). One of our favorite summer flowering bulbs, of the easiest culture, displaying their georgeous tulip like flowers of orange and scarlet daily from July to October.

FLOWERING BULBS.

TO BE PLANTED IN THE FALL.

Crocus. In various colors.

Frittillaria Imperialis (Crown Imperial). Very showy plants, are quite hardy, and when the bulbs are once planted they need no farther culture. Plant five inches deep, one foot, apart.

Snowdrop. This, the earliest of spring flowering bulbs, is universally admired for its elegant snow white drooping blossoms.

Hyacinths. Among all the bulbs used for winter flowers the Hyacinth stands foremost on the list. Two methods are employed in flowering the Hyacinth in winter, one in glasses filled with water, the other in pots or boxes of soil.

Jonquils. Pretty varieties of the Narcissus, having a very agreeable fragrance: adapted to either pot or out-door culture, the bulbs being small six or eight may be put in a six inch pot.

LILIUM LILY. The Liliums are entirely hardy, and with few exceptions quite fragrant, and most of the varieties are exceedingly beautiful.

Auratum. Gold Banded Lily. A magnificent Japan lily.

Candidum. Common White.

Lancifolium Album. White Japan; spotted, fragrant.

Lancifolium Roseum. Rose spotted with crimson.

Lancifolium Rubrum. Red spotted.

Tigrinum. fi pl Double Tiger Lily. Bright orange scarlet with dark spots.

Lancifolium Punctatum. White and pink.

Harrish. (The Bermuda Easter Lily)—The flowers are large, trumpet shaped, pure waxy white, gracefully formed and delightfully fragrant. The ease with which it can be forced into flower in winter has made it wonderfully popular as a winter flower. It is grown extensively for church decorations at Easter.

Lily of the Valley. The Lily of the Valley is as hardy as any plant can possibly be, and when planted in the open ground will increase pretty rapidly.

Narcissus. Garden varieties. Admirably adapted for garden decoration in early spring. They are easily cultivated; hardy; very showy and fragrant.

Tulips. Owing to late spring frosts, bedding plants cannot safely be planted before the early spring flowering bulbs are through blooming. Without these bulbs, for one or two months of beautiful spring weather, our gardens would present a bare appearance. Nothing for the amount of money invested will give a more gorgeous show during early spring, and there is nothing more easily grown than the Tulip. They thrive well in almost any soil; should be planted during October and November.



SPRAYING.

Experience has demonstrated the fact, that Spraying at the proper time and properly done for the protection against destructive insects, rot, fungus and blight is the best if not the only sure remedy against these enemies of the horticulturalist, and that it has succeeded and will succeed is evidenced by the rapidly increasing interest manifested in the manufacture, sale and use of spraying machines, and the good results obtained by those who have practiced this mode of protection.

WHEN TO SPRAY.

Apple Trees. For prevention of leaf blight spray as soon as the leaves are full grown with Bordeaux mixture or ammoniacal carbonate of copper. To destroy the aphis or plant lice, spray with kerosene emulsion as soon as the pests appear. To destroy the codling moth, canker worm and curculio, spray with Paris green or London purple, ¼ pound in 40 or 50 gallons of water, soon after the blossoms fall, and again in two weeks later. To destroy the web worm, spray with London purple or kerosene emulsion about August 1st to 10th, or as soon as they appear. This application should be made during the middle of the day, when the worms are out of their webs and feeding on the leaves.

Cherries. Treatment same as recommended for the apple.

Pears. The pear slug can easily be destroyed by spraying with Paris green four ounces to 50 gallons of water, or kerosene emulsion as soon as it begins operations. Pear and quince blight can be destroyed by spraying with Bordeaux mixture. The codling moth and curculio should be treated same as recommended for apple trees.

Plums. Destroy the aphis with kerosene emulsion and a fine spray nozzle. The curculio can be destroyed by spraying with 3 oz. Paris green to 40 gallons of water. First application should be made as soon as blossoms have fallen, and repeated at intervales of a week or ten days. Four applications should be sufficient. Other enemies of the plum will be destroyed by this method, but in all cases be particular to keep the poison and water constantly stirred.

Peaches. If attacked by the black peach aphis, spray with kerosene emulsion. The plum curculio frequently attack the peach, in which case spray with Paris green, two ounces to 50 gallons of water; be sure to keep it well stirred, and use with caution. Never use London purple on peach trees.

Grape Rot and Mildew use the Bordeaux Mixture.

Currants and Gooseberries. To destroy the worms, spray with powdered white hellebore, one ounce in three gallons of water, as soon as the worms appear. To destroy the yellow aphis, spray with kerosene emulsion early in the season. To prevent mildew, use one-half ounce potassium sulphide to one gallon of water.

FORMULAS.

Kerosene Emulsion. In making the kerosene emulsion for spraying trees for lice, be sure and follow the correct method: Dissolve in two quarts of water one quart of soft soap or ¼ pound of hard soap by heating to the boiling point. Then add one pint of kerosene oil and stir violently for from three to five minutes. This may be done by using a common force pump and putting the end of the hose back into the mixture again. This mixes the oil permanently, so that it will never separate, and it may be diluted easily at pleasure. This mixture should be diluted to twice its bulk with water or about 14 times as much water as kerosene. The kerosene emulsion is successful in destroying cattle lice and sheep ticks, as well as all varieties of plant lice.

Bordeaux Mixture. Six pounds of sulphate of copper are dissolved in six gallons of water; in another vessel four pounds of fresh lime are slacked in six gallons of water. After the latter solution has cooled, slowly turn it into the other solution and add ten gallons of water. This, when all is thoroughly mixed and strained, is ready for use. In straining this mixture reject all of the lime sediment, using only the clear liquid; strain the whitewash through a coarse gunny sack stretched over the head of a barrel.

TREATMENT OF BLACK ROT AND MILDEW OF THE GRAPE, PEAR SCAB AND LEAF BLIGHT.

Bordeaux Mixture. (A) Dissolve 16 pounds of sulphate of copper in 22 gallons of water, in another vessel slack 30 pounds of lime in 6 gallons of water. When the last mixture has cooled

pour it slowly into the copper solution , taking care to mix the fluids thoroughly by constant stiring. It is well to have this compound prepared some days before it is required for use. It should be well stirred before applying.

A solution containing the ingredients in the following proportions has been recommended for general use:

Bordeaux Mixture. (B) Dissolve six pounds of copper in 16 gallons of water, and slack four pounds of fresh lime in six gallons of water. When cool mix the solution as described above.

Solution of Ammoniacal Carbonate of Copper. Into a vessel having a capacity of about one gallon, pour one quart of ammonia (strength 20 degrees Baume); add three ounces of carbonate of copper; stir rapidly for a moment and the carbonate of copper will dissolve in the ammonia, forming a very clear liquid. For use dilute to 25 gallons.

Eau Celeste, Modified Formula. Dissolve four pounds of copper sulphate in ten or twelve gallons of water. Add three pints of strong ammonia, dilute to 50 gallons, and add five pounds of common washing soda. Stir thoroughly and the solution is ready for use. This may be used in place of the mixture mentioned above, but no special advantage is claimed for it over the other

The Cornell University, College of Agriculture, Ithica, N. Y., recommends carbonate of copper for grape diseases instead of Bordeaux mixture, because it is much more easy to prepare and handle, and it is also cheaper. There are two or three good formulas: Dissolve three ounces of carbonate in a quart of ammonia and dilute to 25 gallons. Another good formula is five ounces of carbonate in three pints of strongest ammonia, and dilute to 50 gallons.

(From the Journal of Mycology, Washington, D. C., 1891.)

* * * The cheapest and most effectual remedy for black rot and downy mildew, taking everything into consideration, is the ammoniacal solution of copper carbonate. Next to this, a mixed treatment consisting of two or three early sprayings of Bordeaux mixture and the same number of late treatments with ammoniacal solution.

No Danger Whatever. Not only hundreds, but thousands of tons of mineral poisons have been employed during the past decade by farmers throughout the country, whether to protect the potato crop, or the cotton crop, or other products of the soil from the ruinous attacks of insects. The general experience during this long period and over the whole country is so emphatically in favor of their use, and their perfect safety and harmlessness, with ordinary precautions, as to render almost laughable the objections of the few persons who object to them. No advancement, no improvement, no general benefit to the human race is ever accomplished without some attendant danger, and those who inveigh against such improvements as increasing the risks of life stand on the same footing as the opponents to arsenical poisons as insecticides. Report of the United States Entomological Commission.

(New York Weekly Tribune, Nov. 4, 1891, by Professor A. J. Cook.)

Lime with the Arsenites. Use of the ansenites, London purple and Paris green, to protect apples is becoming very common. We should never use these poisons stronger than one pound to 200 gallons of water; that strength is always sufficient to accomplish the purpose. If weaker than this, we do not always reap full benefit. Last year Professor Gillette found that by the use of lime with these substances the soluble arsenic was changed into an invaluable compound, and then the follage was not injured. The same has been proved true at the Michigan station. We experimented on all our fruit trees, even the tender peach, and the lime in every case prevented all injury. We tried several applications at intervals of ten days on some plants, and no harm resulted. We see then, that by use of Bordeaux mixture or limewater instead of pure water, we can entirely prevent injury to foliage by the arsenites. The limewater should be formed by putting from 1 to 4 pounds of thoroughly slaked lime into 100 gallons of water. If we wish to use an insecticide and a fungicide at the same time, then we may add 1 pound of London purple to 100 gallons of Bordeaux mixture. In every case the lime must be carefully and thoroughly soaked, or that will kill the foliage.

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